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VOLUME 1	· · ·	VOI	LUME 2	V	OLUME 3		VOLUME 4			VOLUME 5 *	: * *
PROG. ID. NAME TABLE OF CONTENTS	P/N 2191292	0380 CORE STURAGE	AME P/N FUNCTION TEST	PROG. ID.	NAME P/		. NAME	P/N	PROG. ID.	NAME	P/N
CPU TEST INDEX O3A1 CPU FUNCTION TEST	2191290	V 03B1 ***** LISTING - DECK/TAPE	- HI CORE 2243964 2243965	0300 DIAGNOS	TIC MONLTOR		KEYBOARD/CONSOLE PR	NTER TEST	0318 SC	A INSTRUCTION FUNC	CTION TEST
DESCRIPTION LISTING ** DECK/TAPE	2191206 2191204 2191205	DESCRIPTION	ON 2243966 - LO CORE 2243967	•		200	DESCRIPTION LISTING DECK/TAPE	2191242 2191240 2191241		DESCRIPTION LISTING DECK/TAPE	2243567 2243565 2243566
03A3 BASIC DIAGNOSTIC LOADER	•	03A4 METER TEST		0308 2315 DI	SK INITIALIZATION	0305	1627 PLOTTER FUNCTIO		0311 SC	A WRT/RD BFR, LINE	• •
DESCRIPTION LISTING DECK/TAPE	2191254 2191252 2191253	DESCRIPTION LISTING DECK/TAPE	2191248	LIST	CRIPTION 2191 TING 2191 C/TAPE 2191	216	DESCRIPTION LISTING DECK/TAPE	2191238 2191236 2191237		DESCRIPTION LISTING DECK/TAPE	2191274 2191272 2191273
03A5 ONE-CARD DIAGNOSTIC PROGR	RAMS	03A6 CORE STORAGE	ADJUSTMENT TEST	0309 DISK ST	ORAGE FUNCTION TES	T 030B	1134/1055 FUNCTION 1	EST	0319 SC	A WRAP AROUND TEST	т
DESCRIPTION LISTING DECK/TAPE	2191262 2191260 2191261	DESCRIPTION LISTING DECK/TAPE	2191244	LIST	RIPTION 2191 ING 2191 VTAPE 2191	212	DESCRIPTION LISTING DECK/TAPE	2191234 2191232 2191233		DESCRIPTION LISTING DECK/TAPE	2243570 2243568 2243569
O3AD BASIC DIAGNOSTIC LOADER -	- 2501 ₍	03A8 INTERRUPT TES	ST	03AA RELOCAT	ING LOADER - 1442	030C 1	1132 PRINTER FUNCTIO	N TEST	03 AE SC/	A TRANSMIT/RECEIVE	E - STR
DESCRIPTION Listing Deck	2243561 2243559 2243560	DESCRIPTION LISTING ** DECK/TAPE	/ 2191268	DESC LIST DECK		281	DESCRIPTION LISTING DECK/TAPE	2191222 2191220 2191221		DESCRIPTION LISTING DECK/TAPE	2191280 2191278 2191279
		030A CE UTILITY PR	ROGRAMS	03AB RELOCAT	ING LOADER - 2501	030F	1442 FUNCTION TEST		03 A F S C/	A DISPLAY PROGRAM	
		DISK ADJUSTHE DESC/LIST DECK/TAPE	ENT 2243957 2243958	DESC LIST DECK		284	DESCRIPTION LISTING DECK	2191226 2191224 2191225		DESCRIPTION LISTING DECK/TAPF	2243564 2243562 2243563
		O3AO SCOPE LOOPS	. 224)990	03AC RELOCAT	ING LOADER - PAPER	TAPE 032F	442 TIMING TEST		0317 SCA	TRANSHIT/RECEIVE	-BSC POINT TO POINT
		DESC/LIST DECK/TAPE	2243962 2243963	DESC LIST TAPE		286	DESCRIPTION LISTING DECK	2191230 2191228 2191229		DESCRIPTION LISTING DECK/TAPE	2243973 2243971 2243972
		0302 DIMAL	- · · · · · · · · · · · · · · · · · · ·	0314 1231 FU	NCTION TEST (NOTE	2) 0302 2	2501/1442-5 F.T.		031A SCA	TRANSMIT/RECEIVE	-BSC MULTI POINT
		DESCRIPTION DECK/TAPE	2243960	LIST	RIPTION 2243 ING 2243 /TAPE 2243	553	DESCRIPTION LISTING DECK/TAPE	2243552 2243550 2243551		DESCRIPTION LISTING DECK/TAPE	2243976 2243974 2243975
** TAPE CONTAINS TH	HE P.T. LOADER	IAGNOSTIC LOADER: 03A	-	9300 1403 PR	INTER FUNCTION TES		TEST CARDS	2243549		· · · · -	:0000
00112125 01121 011	LOADER O3AA, O3AB,	SYNCHRONOUS COMMUNICAT , OR O3AC	IUNS ADAPTER	LIST	RIPTION 2243 ING 2243 /TAPE 2243	556					

DATE	EC NUMBER	DATE	EC NUMBER	TAB	LE OF CON	TENTS	
5N0V68	571005			MAT	NTENANCE	DIAGNOST	I CS
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 ALL TESTS IN VOLUMES 3, 4, AND 5 RUN UNDER CONTROL OF THE DIAGNOSTIC MONITOR: 0300, EXCEPT PID 03AE AND PID 03AF.

2. DOCUMENTATION IS PRESENT ONLY ON SYSTEMS WITH A 1231.

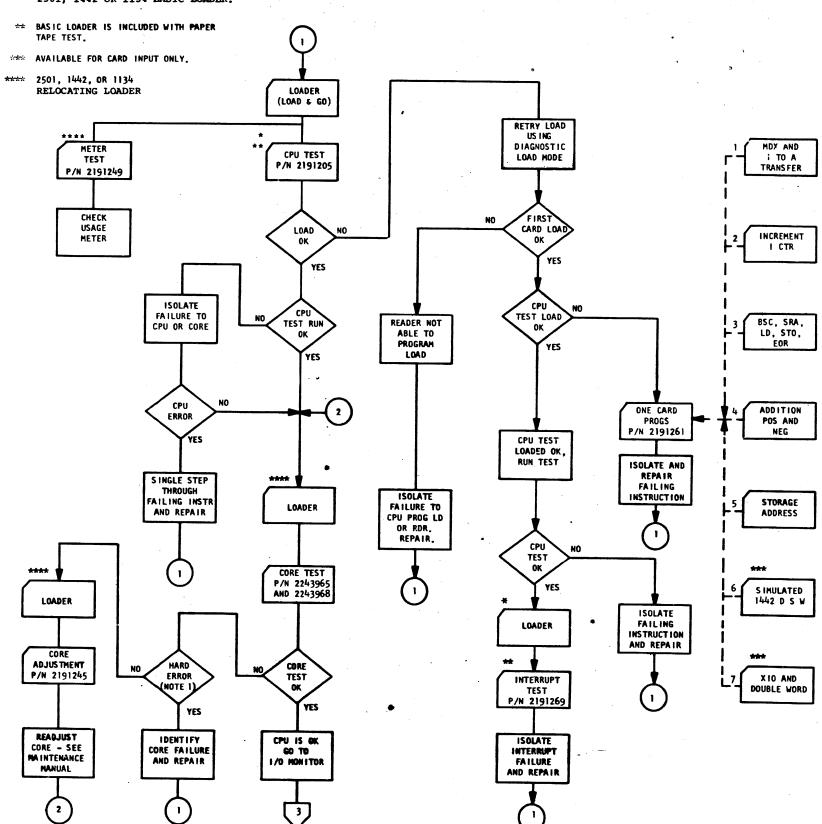
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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM CPU TEST INDEX

* 2501, 1442 OR 1134 BASIC LOADER.



CPU NORMAL OPERATION SUMMARY

BASIC LOADER

- 1. LOAD AND GO MODE: PROVIDES NORMAL LOAG FOR CPU AND INTERRUPT TESTS.
- DIAGNOSTIC MODE: USED ONLY WHEN LOAD AND GO MODE IS INOPERABLE, SEE DESCRIPTION FOR DIAGNOSTIC OPERATING INSTRUCTIONS.

CPU TEST

- 1. SET ALL CONSOLE BIT SWITCHES OFF.
- 2. LOAD BASIC LOADER FOLLOWED BY CPU TEST DECK AND TWO BLANK CARDS.
- 3. PROG WILL LOAD AND STOP WITH B REG AT 3000 ADDR. 012D.
- 4. SET ALL BIT SWITCHES TO FFFF AND PRESS PROG START.
- 5. PROG WILL STOP WITH B REG AT 3001 ADDR. 0284.
- 6. SET SWITCHES OFF PRESS START.
- 7. PROG WILL HALT WITH B REG AT 3002 ADDR. 02C5. SEE 3.2 FOR OPTIONS AND PRESS START.
- 8. PROG WILL RUN APPROX 2 MIN. THEN STOP AT END OF TEST WITH B REG AT 3003 ADDR 0F62.
- 9. ERRORS ARE INDICATED BY ERROR WAITS, SEE DESCRIPTION SECT. 3.5.

CORE TEST

- 1. SET ALL CONSOLE BIT SWITCHES TO ZERO.
- LOAD RELOCATING LOADER FOLLOWED BY HI CORE TEST DECK, LO CORE TEST DECK AND TWO BLANK CARDS.
- 3. HI CORE WILL LOAD, AND HALT WITH B REG AT 3001. THE CORE SIZE WILL BE IN THE ACCUMULATOR.
- 4. FRESS START, HI CORE WILL RUN 5 MIN. FOR EACH 8K.
- PRESS START. LO CORE WILL LOAD, HALT TO DISPLAY CORE SIZE, RUN APPROX.
 MIN., THEN STOP AT END OF TEST WAIT 30FF, AT LOCATION 09CC.
- 6. ERRORS ARE INDICATED BY ERROR WAITS; SEE DESCRIPTION SECT. 3.5.

CORE ADJUSTMENT

1. USED ONLY WHEN A CORE VOLTAGE ADJUSTMENT IS NECESSARY, SEE DESCRIPTION.

ONE CARD PROGRAMS

1. USED ONLY WHEN PROGRAM LOAD IS FUNCTIONING, BUT THE BASIC DIAGNOSTIC LOADER IS UNABLE TO CORRECTLY LOAD THE CPU OR CORE TESTS. SEE DESCRIPTION FOR OPERATION.

INTERRUPT TEST

- 1. USED ONLY TO AID IN DIAGNOSING BASIC LOADER FAILURES IN LOAD AND GO MODE. SEE DESCRIPTION FOR OPERATION.
- NOTE 1: A HARD ERROR IS A REPEATABLE ERROR WHICH IS CAUSED BY A HARDWARE FAILURE, A SOFT ERROR IS AN INTERMITTENT ERROR WHICH MAY BE CAUSED BY EITHER AN INTERMITTENT HARDWARE FAILURE OR BY MARGINAL CORE VOLTAGE ADJUSTMENT. THE DISTINCTION BETWEEN THE TWO IS DIFFICULT AND MUST BE LEFT TO THE DISCRETION OF THE INDIVIDUAL CE.
 - 2: PART NUMBER IS THE SAME FOR BOTH CARD DECK OR PAPER TAPE PROGRAM. WHEN ORDERING SPECIFY CARD OR TAPE.
 - 3: CONTROL OPTION BIT SWITCH SETTINGS ARE FOUND IN THE PROGRAM DESCRIPTION.

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2.	REQU	IRE	MEN	TS	•	•	•		•	•	•	•	٠	•	•	•	•	•	•	• 1	•	•	•	•	•	•	•	•	•	•	1A	
	2.1 2.2		PRO EQU				-						S																			
3.	USE	PRO	CED	URI	E	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1A	
	3.1 3.2 3.3 3.4 3.5		LOA PRO TER RES	GR. MII	AM NAT RT	10 11 19	PEF ON ROC	RAT	10																							
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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM CPU FUNCTION TEST

1. PURPOSE

THE PURPOSE OF THE 1130 CENTRAL PROCESS UNIT FUNCTION TEST IS TO LOCATE FAILING INSTRUCTIONS. EACH SEPARATE CPU INSTRUCTION IS TESTED AND CHECKED FOR COMPLIANCE WITH THE PRODUCT SPECIFICATIONS. FEATURES THAT ARE NOT UNIQUE TO AN OPERATION CODE (INDEXING, INDIRECT ADDRESSING, ETC.) ARE ALSO TESTED. 1/O RELATED FEATURES (INTERRUPT, CYCLE STEAL, ETC.) ARE NOT TESTED.

2. PREREQUISITES

2.1 PROGRAM PREREQUISITES

THE PROGRAM CAN BE OPERATED BY ITSELF BUT MUST BE LOADED BY THE 1130 BASIC DIAGNOSTIC LOADER.

2.2 EQUIPMENT PREREQUISITES

- A. 1130 PC HAVING 4096-WORD STORAGE.
- B. CARD READER OR PAPER TAPE READER.

3. USE PROCEDURE

3.1 PROGRAM LOADING

THE1130 CPU FUNCTION TEST (03A1) IS LOADED BY THE 1130 BASIC LOADER. SEE THE 1130 BASIC LOADER DOCUMENTATION FOR THE DESCRIPTION OF THE LOADING PROCEDURE.

3.2 PROGRAM OPERATION

AFTER THE PROGRAM IS LOADED THE FOLLOWING NORMAL WAITS OCCUR,

LOCATION

B REG SYMBOLIC

DESCRIPTION AND ACTION

3000 (X000) START OF PROGRAM. SET ALL BIT SWITCHES ON. PRESS START.

3001 (X001) TESTING OF BIT SWITCHES ON COMPLETE, TURN OFF, PRESS START.

3002 (X003) TESTING OF BIT SWITCHES OFF COMPLETE SET IN OPTION, PRESS START.

3003 (X007), PROGRAM COMPLETED. PUSH START TO RERUN PROGRAM. IF OTHER WAITS OCCUR, REFER TO SECTION 3.5 FOR ERROR ISOLATION.

ANY WAITS OTHER THAN THOSE ABOVE ARE ERROR WAITS.

WHEN AN ERROR WAIT IS OBTAINED,

- 1. SEE THE PROGRAM LISTING TO DETERMINE THE PROBLEM. ERROR WAITS ARE DOCUMENTED AT THE FRONT OF THE PROGRAM LISTING BY THE CONTENTS OF THE B REGISTER.
- 2. IF THE ERROR WAIT HAS B REGISTER LESS THAN 3069, THE OPERATOR CANNOT LOOP ON THAT ERROR. INSTEAD, THE OPERATOR SHOULD SINGLE INSTRUCTION STARTING AT THE BEGINNING OF THE FAILING ROUTINE TO DETERMINE THE EXACT FAILURE. (SECTION 3.5)

- 3. IF THE ERROR WAIT HAS B REGISTER GREATER THAN 3068, THE OPERATOR SHOULD, (SECTION 3.5)
 - A. LOOP INSTRUCTION BEING TESTED (BIT SW 8 ON)
 OR IF A LARGER LOOP IS DESIRED
 LOCK ON ERROR (BIT SW 12 ON)
 OR
 - LOOP ON ROUTINE (BIT SW 10 ON)
 - B. SINGLE STEP TO LOCATE THE EXACT FAILURE.
 - C. IF NO ERROR OCCURS, BYPASS THE ERROR WAIT (BIT SW 14 ON) AND USE A SCOPE TO DETERMINE THE FAILURE.

TABLE 1

**************************************	****
* DATA ENTRY SWITCHES * DESCRIPTION	*
* 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 *	*
*	*
* BYPASS ERROR WAIT (SEE N	iOTE) *
* • • • •	*
* 1 LOCK ON ERROR	*
* • • • •	*
* l LOOP PROGRAM	*
* • • •	*
* 1 LOOP ON ROUTINE	*
* • •	*
* . 1 LOOP ON INSTRUCTION BEIN	G TESTED *
*	*
* 1 BYPASS MPL/DIV TEST	*
*	*
* NOTE- IF ERROR OCCURS, BITS 12 OR 8 MUST BE ON TO MAKE BIT 14 E	FFECTIVE. *

3.3 TERMINATION

NORMAL TERMINATION OCCURS WITH PROGRAM STOPPING AT WAIT WITH B REG = 3003.

3.4 RESTART PROCEDURE

PRESS STOP, RESET, AND START BUTTONS.

3.5 ERROR WAITS

THERE ARE TWO TYPES OF ERROR CONDITIONS WHICH CAUSE ERROR WAITS.

- 1. ERRORS WHICH USE THE COMMON ERROR CONTROL ROUTINE (FOOO).
- 2. ERRORS WHICH OCCUR BEFORE SUFFICIENT PORTIONS OF THE HARDWARE HAVE BEEN CHECKED OUT TO ALLOW USE OF THE COMMON ERROR CONTROL ROUTINE.

ERRORS WHICH USE THE COMMON ERROR CONTROL ROUTINE HAVE B REG NUMBERS OF /3069 AND UP. WHEN A NUMBERED WAIT OCCURS, BITS 5-15 OF THE STORA (B REG = 3XXX). WHEN A NUMBERED WAIT OCCURS, BITS 5-15 OF THE STORAGE BUFFER REGISTER GIVE THE ERROR IDENTIFICATION NUMBER. TO FIND THE FAILING ROUTINE, LOOK IN THE ERROR IDENTIFICATION TABLE (IN FRONT OF THE LISTING). THIS WILL GIVE YOU THE SYMBOLIC AND ACTUAL STARTING ADDRESS OF THE ROUTINE THAT FAILED.

ERRORS WHICH DO NOT USE THE COMMON ERROR CONTROL ROUTINE HAVE B REGISTER FROM /3003 THRU /3068. THE INSTRUCTION REG WILL POINT DIRECTLY TO THE FAILING ROUTINE. TO FACILITATE FINDING THE START OF A TEST ROUTINE EACH TEST ROUTINE BEGINS WITH A LABEL HAVING AN A OR B AS ITS FIRST LETTER. IN THE LISTING EACH ROUTINE IS FURTHER BRACKETED BY A SOLID LINE OF ASTRISKS. TO FIND THE FAILING ROUTINE OF ERRORS WHICH DO NOT USE THE COMMON ERROR CONTROL START AT THE LOCATION SPECIFIED BY THE ERROR WAIT AND WORK UP THE LISTING (BACKWARDS) UNTIL THE FIRST SYMBOLIC LOCATION WHICH HAS A LABEL BEGINNING WITH A AND B. THIS IS THE START OF THE FAILING ROUTINE.

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TWO WAYS OF LOCATING A FAILURE ARE AS FOLLOWS-

- A. DETERMINE WHAT FAILURE CAUSED THE ERROR WAIT. TO LOCATE THE FAILURE, IT IS RECOMMENDED THAT THE PROGRAM BE MANUALLY ENTERED AT THE START OF THE FAILING ROUTINE AND SINGLE INSTRUCTION, FOLLOWING THE LISTING TO DETERMINE THE EXACT FAILURE.
- B. USE AN OSCILLOSCOPE TO HELP LOCATE THE FAILURE. IF THE FAILURE IS IN THE COMMON-ERROR ROUTINE, SIMPLY TURN ON CONSOLE ENTRY SWITCH 8 AND DEPRESS START PUSHBUTTON TO LOOP ON THE INSTRUCTION BEING TESTED. IF THE FAILURE IS IN THE FIRST PART OF THE PROGRAM (BEFORE THE COMMON ERROR ROUTINE INSTRUCTIONS HAVE BEEN CHECKED OUT), A BRANCH (MDX) TO THE BEGINNING OF THE ROUTINE MAY BE MANUALLY INSERTED IN PLACE OF THE WAIT INSTRUCTION. THEN, THE ROUTINE MAY BE LOOPED.
- 4. PRINTOUTS (NONE)

5. COMMENTS

CPU FUNCTION TEST

THE 1130 CPU FUNCTION TEST STARTS WITH VERY SIMPLE INSTRUCTIONS AND DETERMINES IF EACH INSTRUCTION PERFORMS TO SPECIFICATIONS. EACH SUCCESSIVE ROUTINE ATTEMPTS TO UTILIZE ONLY AN INSTRUCTION THAT HAS NOT BEEN PREVIOUSLY TESTED. THE PROGRAM OPTIONS PROVIDE A MEANS FOR CONTINOUSLY LOOPING THE ENTIRE PROGRAM AND ALSO ALLOW FAILING ROUTINES TO BE LOOPED.

AN ATTEMPT IS MADE DURING THE EARLY STAGES OF THE PROGRAM TO DEVELOP THUSE INSTRUCTIONS WHICH ALLOW THE USAGE OF THE COMMON CONTROL (FOOE AND FOO5) AND ERROR (FOOO) ROUTINES. AFTER THESE INSTRUCTIONS HAVE BEEN TESTED THE USER THEN HAS THE ABILITY TO REQUEST VARIOUS CONTROL OPTIONS BY MEANS OF THE DATA ENTRY SWITCHES.

5.1 OPERATING MODES

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

THE NORMAL MODE OF OPERATION IS WITH THE DATA ENTRY SWITCHES SET TO /0000. THIS CAUSES A SINGLE PASS THROUGH THE PROGRAM WITH AN ERROR WAIT OCCURING IF AN ERROR IS DETECTED.

IF AN ERROR IS DETECTED AND THE COMMON ERROR WAIT OCCURS, THE USER SHOULD TURN ON THE '' LOOP ON ROUTINE '' (DATA ENTRY SWITCHES SET TO /0020) AND SINGLE INSTRUCTION THROUGH THE FAILING ROUTINE TO ISOLATE THE FAILING INSTRUCTION.

IF THE FAILING ROUTINE DOES NOT FAIL WHEN EXECUTED IN SINGLE INSTRUCTION MODE, THE USER CAN TURN ON THE '' BYPASS ERROR WAIT'' SWITCH AND THE ''LOOP ROUTINE'' SWITCH (DATA ENTRY SWITCHES SET TO /0022) AND PROCEED TO USE SCOPING TECHNIQUES TO ISOLATE THE FAILURE.

5.2 PROGRAM LABELS

LABELS OCCURING IN THE PROGRAM LISTING CAN BE QUICKLY IDENTIFIED AS FOLLOWS-

- A. LABELS STARTING WITH A OR B INDICATE THE BEGINNING OF A TEST ROUTINE.
- B. LABELS STARTING WITH G, H, J, OR K INDICATE COMMUNICATION LABELS WITH A ROUTINE.
- C. LABELS STARTING WITH V OR X ARE RESERVED FOR WAITS.
- D. LABELS STARTING WITH N, R, OR S INDICATE A CONSTANT OR WORK AREA.
- E. LABELS STARTING WITH F, W, Z OR U ARE USED IN COMMON OR SPECIAL ROUTINES THAT ARE NOT A REGULAR TEST ROUTINE.

6. APPENDIX (NONE)

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PAGE 1A

CPU FUNCTION TEST

	ABS			3A100020
0000	ORG	/3000		3A100030
*************	*******	*********	********	*3A100040
	*			3A100050
•	*			3A100060 3A100070
	*			3A100080
	•			3A100090 -
	*			3A100100
	•			3A100110
	*			3A100120
	*			3A100130 3A100140
	*			3A100140
	*			3A100160
	•			3A100170
	*			3A100180
	*			3A100190
	*			3A100200
************	******	*******	*********	**3A100210
	*			3A100220 3A100230
	_	PERATING INS	IRUCIIUMS	3A100230 3A100240
	*	BIT SWITCH	CETTINGS	3A100250
	•	BII SWITCH	35111403	3A100260
	*	RIT 14 ON	BYPASS ERROR WAIT	3A100270
		511 11 511		3A100280
	*	BIT 12	OR 8 MUST BE ON TO	3A100290
	•	MAKE B	IT 14 EFFECTIVE.	3A100300
	*			3A100310
	*	BIT 13 NOT	USED	3A100320 3A100330
	*	BIT 12 LOC	v ON E8000	3A100340
	*	B11 12 LUC	A OH ERROR	3A100350
	*	RIT 11 ON	LOOP PROGRAM	3A100360
		01. 11 0		3A100370
	*	BIT 10 ON	LOOP ROUTINE	3A100380
	*	•	•	3A100390
	•	BIT 9 NOT	USED	3A100400
			O ON INCTRUCTION DEING	3A100410 3A100420
	* '		P ON INSTRUCTION BEING	3A100420
	•		BYPASS MPL/DIV TEST	3A100440
		51. . 5		3A100450
	•			3A100460
	•			3A100470
	*			3A100480
	*			3A100490
				3A100500 3A100510
	*			3A100520
	•			3A100530
************	********	**********	******	
B-REG I-REG	*	A HALT AT		3A100550
************	*******	*********	**********	
	*			3A100570
3000 0 012E	DC	13000x	1130 AND 1800	3A100580 3A100590
	*		SET DATA ENTRY SWITCHES TO /FFFF & PRESS START	3A100590
	*		TO FILL & PRESS SIMM!	3A100610
	•		\$18000 ALSO SET S/P SWS T	
			/FFOO AND PRESS START	3A100630
	•			3A100640
3001 0 0285	DC	x001&1	SET SENSE/PROG AND	3A100650
	*		DATA ENTRY SWITCHES	3A100660
	•		TO ZEROS AND PRESS	3A100670 3A100680
	*		START	3A100680 3A100690
	*			34400070

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2002 - 000/	0.6	×00361	CET CHIT	CHES FOR OPTIONS	3A100700
3002 0 0206	DC •	X003£1	AND PRES		3A100710
			AND THES.	,	3A100720
3003 0 0F63	DC	X007&1	PROGRAM (COMPLETED	3A100730
•	k				3A100740
•		******	******	*******	3A100750 3A100760
1		NTIFICATION	LISTING		3A100780
	FERKOR IDE	MITEICATION	LISTING		3A100780
	•				3A100790
1	•				3A100800
•	•				3A100810
************		******	*******	******	3A100830
ADDRESS OF	*				3A100840
	* A REG Q R	EG XR-1 X	R-2 XR-3	STATUS	3A100850
************	*******	********	*******	************	
3004 0 012E	DC	A080	MDX		3A100870
•		M MDX FAILE	D TO MODIFY	I CIK FI	3A100880 3A100890
	* *				3A100900
3005 0 012E	DC	A080	MDX	0300M	3A100910
3006 0 012E	DC	A080		٤1	3A100920
			D HAVE MODI	FIED I CTR	3A100930
		DIFIED BY C	OR &1		3A100940 3A100950
	* *				3A100960
3007 0 012E	• DC	080A	MDX	03G0M	3A100970
3008 0 012E	DC	A080	1102	61	3A100980
3009 0 012E	DC	A080		& 2	3A100990
300A 0 012E	DC	080A		£3	3A101000
			D HAVE MODI		3A101010 3A101020
	* &4 BUT ME	DOTLIED BA (D, £1, £2 DR	. 63	3A101020
1	*				3A101040
3008 0 012E	DC	A080	MDX		3A101C50
/ 5555 5 5555	* MDX SHOR	T FORM FAILE	ED TO MODIFY	I CTR	3A101060
i	*				3A101070 3A101080
	*	4000	MDX	0300M	3A101080
300C 0 012E 300D 0 012E	DC DC	080A 080A	HUA	£1	3A101100
300E 0 012E	DC	A080		٤2	3A101110
3002 0 0122	* MDX SHOR	T FORM-SHOUL	LD HAVE MODE	IFIED I CTR	3A101120
	* -2, DID	HODIFY BY O	, £1 OR &2		3A101130 3A101140
					3A101150
2005 0 0175	* DC	AOCO	BSC.C		3A101160
300F 0 013F		/A N/A	N/A N/A	030	3A101170
		PED-SHOULD	NOT HAVE		3A101180
	*				3A101190
	*		255 2		3A101200 3A101210
3010 0 013F	DC	A0C0	BSC.0		3A101210
3011 0 013F	DC * N/A N	A0C0 /A N/A	N/A N/A	C&O AFTER LDS	3A101230
	* N/A N	/A N/A	N/A N/A	C AFTER 1ST BS	C 3A101240
	# FIRST BS	C SKIPPED-S	HOULD NOT H	AVE	3A101250
	* SECOND B	SC FAILED T	O SKIP-INDI	CATING 1ST BSC	3A101260 3A101270
		O TURN OFF	OVERFLOW		3A101270
	*				3A101290
3012 0 013F	DC	A0C0	BSC+C		3A101300
2012 A 0126	* N/A N	/A N/A	N/A N/A	OFF	3A101310
	* BSC DID	NOT SKIP WI	TH OVERFLOW	OFF	3A101320
					3A101330 3A101340
	₽	A100	LD		3A101350
3013 0 014C	DC ≠ 0000 N	/A N/A	N/A N/A	N/A	3A101360
		T EQUAL TO	**		3A101370

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3031 0 01/		DC	A180	ACCUM NOT EQUAL 03FF	3A102050	
302F 0 01/ 3030 0 01/		DC DC	A180 A180	ACCUM NOT EQUAL OFFF ACCUM NOT EQUAL O7FF	3A102030 3A102040	
302E 0 015		DC	A140	ACCUM NOT EQUAL 1FFF	3A102020	
302D 0 01/	40	DC	A180	ACCUM NOT EQUAL 3FFF	3A102010	
302C 0 01A	-	DC	A180	ACCUM NOT EQUAL 7FFF	3A102000	
302B 0 01A	. •	DC DC	A180 A180	ACCUM NOT EQUAL FFFF	3A101980	
302A 0 01A		*	A1 00	ACCUM NOT EQUAL FFFF	3A101970 3A101980	
		•			3A101960	
				SING SRA 1 AND BSC E.	3A101950	
		* FAILURE OF	N A ROUT	INE THAT LOADS FFFF ON	3A101940	
				CCUR AS A RESULT OF A	3A101920	
		* FFFF N//		N/A N/A N/A LOADED N/A N/A N/A AFTER SRAƏS	3A101910 3A101920	
3029 0 015	54	DC .	A140	ACCUM NOT EQUAL 0000	3A101900	
3028 0 019	- '	DC	A140	ACCUM NOT EQUAL 0000	3A101890	
3027 0 015		DC	A140	ACCUM NOT EQUAL 0001	3A101880	
3026 0 015		DC	A140	ACCUM NOT EQUAL 0003	3A101870	
3025 0 015		DC DC	A140	ACCUM NOT EQUAL 0007	3A101860	
3023 0 015 3024 0 015		DC DC	A140 A140	ACCUM NOT EQUAL COOF	3A101850	
3022 0 015		DC DC	A140	ACCUM NOT EQUAL 003F ACCUM NOT EQUAL 001F	3A101830 3A101840	
3021 0 015		DC	A140	ACCUM NOT EQUAL 007F	3A101820	
3020 0 015		DC	A140	ACCUM NOT EQUAL OOFF	3A101810	
301F 0 015		DC	A140	ACCUM NOT EQUAL OIFF	3A101800	
301E 0 015		DC	A140	ACCUM NOT EQUAL 03FF	3A101790	
301C 0 015		DC	A140	ACCUM NOT EQUAL OFF	3A101780	
301B 0 015		DC	A140	ACCUM NOT EQUAL OFFF	3A101770	
301A 0 015		DC DC	A140 A140	ACCUM NOT EQUAL 3FFF ACCUM NOT EQUAL 1FFF	3A101750 3A101760	
3019 0 015		DC	A140	ACCUM NOT EQUAL 7FFF	3A101740	
		•		460 M NOT 55000 7555	3A101730	
		*			3A101720	
		* BSC SKIPPE			3A101710	
		* FFFF N/A		N/A N/A N/A	3A101700	
3018 0 015	i4	DC	A140	BSC, E	3A101690	
		*			3A101680	
		* FFFF N/A	N/A	N/A N/A N/A	3A101660 3A101670	
3017 0 015	4	DC	A140	BSC+&	3A101650	
		*		BCC C	3A101640	
		•			3A101630	
		* NEGATIVE			3A101620	
				F 0000 DID NOT LEAVE ACC	3A101610	
		* FFFF N/A		N/A N/A N/A AFTER LD	3A101600	
2010 0 012	•	* 0000 N/A		N/A N/A N/A 1ST VALVE	3A101590	
3016 0 015		DC	A140	LD	3A101580	
		•			3A101560 3A101570	
		*			3A101550 3A101560	
		*			3A101540	
		* BSC FAILED	TO SKIP		3A101530	
·		* 0000 N/A		N/A N/A N/A	3A101520	
3015 0 014	c	DC	A100	BSC,E	3A101510	
		•			3A101500	
		*	LYUAL	0000	3A101490	
		* A LOAD OOU * LEAVE ACCU	-		3A101470 3A101480	•
		* 0000 N/A		N/A N/A N/A 2ND LD LD BY LOAD 0000 DID NOT	3A101460 3A101470	
		* 0000 N/A		N/A N/A N/A 1ST LD	3A101450 3A101460	
3014 0 014	C	DC	A100	LD N/A N/A N/A IST ID	3A101440	
********				*******************		
	UTINE			XR-2 XR-3 STATUS	3A101420	
	OF	•			3A101410	
AD	DRESS	*			3A101400	•
******	******		******	*************		
					3A101380	

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ADDRESS	*	3A10207
OF	*	3A10208
-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A10209
********	**************************************	
032 0 01A0	DC A180 ACCUM NOT EQUAL OIFF	3A10211
033 0 01A0	DC A180 ACCUM NOT EQUAL COFF	3A10212
034 0 01A0	DC A180 ACCUM NOT EQUAL 007F	3A10213
035 0 01A0	DC A180 ACCUM NOT EQUAL 003F	3A10214
036 0 01A0	DC A180 ACCUM NOT EQUAL GO1F	3A10215
037 0 O1AO	DC A180 ACCUM NOT EQUAL 900F	3A10216
038 0 01A0	DC A180 ACCUM NOT EQUAL 0007	3A10217
039 0 01AO	DC A180 ACCUM NOT EQUAL 0003	3A10218
03A 0 01A0	DC A180 ACCUM NOT EQUAL 0001	3A10219
03B 0 01A0	DC A180 ACCUM NOT FQUAL 0000	3A10220
03C 0 01A0	DC A180 ACCUM NOT EQUAL 0000	3A10221
	* FFFF N/A N/A N/A N/A N/A LOADED	3A10222
	* 0000 N/A N/A N/A N/A AFTER SRA@S	3A10223
	* THE ABOVE WAITS OCCUR AS A RESULT OF A	3A10224
	* FAILURE ON A ROUTINE THAT LOADS FFFF ON	3A10225
	* FFFF AND CHECKS USING SRA 1 AND BSC E.	3A10226
	*	3A1022
		3A10228
03D 0 01EB	DC A1CO LD 0000 ON 0000	3A10229
030 0 0166	* 0000 N/A N/A N/A N/A	3A10230
	* ACCUM NOT EQUAL OOOO	3A1023
	*	3A1023
		3A1023
035 0 0150	DC ALCO LD FFFF DN 0000	3A1023
03E 0 01EB		3A1023
	* 0000 N/A N/A N/A N/A BEFORE LD	
	* FFFF N/A N/A N/A N/A AFTER LD	3A1023
	* ACCUM NOT EQUAL FFFF	3A1023
	*	3A1023
	•	3A1023
03F 0 01F5	DC A1DO LD	3A1024
	# 0000 N/A N/A N/A N/A	3A1024
	* ACCUM NOT EQUAL 0000	3A1024
	•	3A1024
	•	3A1024
040 0 01F5	DC A1DO EOR .	3A1024
	* 0000 N/A N/A N/A N/A	3A1024
	+ 0000 N/A N/A N/A N/A	3A1024
	* WITH ACCUM EQUAL OOOD AN EOR USING OOOD DID	3A1024
	* NOT RESULT IN ACCUM EQUAL 0000	3A1024
	*	3A1025
	•	3A1025
041 0 01F5	DC Aldo EDR	3A1025
AAT O OTLA	* FFFF N/A N/A N/A N/A N/A LOADED & EOR	3A1025
	* 0000 N/A N/A N/A N/A N/A SHOULD BE	3A1025
	* WITH ACCUM EQUAL FFFF AN EOR USING FFFF DID	3A1025
	* NOT RESULT IN ACCUM EQUAL 0000	3A1025
		3A1025
	•	3A1025
	*	
042 0 01F5	DC A1DO EOR	3A1025
043 0 01F5	DC A1DO	3A1026
	* 0000 N/A N/A N/A N/A BEFORE	3A1026
	* FFFF N/A N/A N/A N/A S/B AFTER	3A1026
i .	* WITH ACCUM EQUAL OOOD AN EOR USING FFFF DID	3A1026
	* NOT RESULT IN ACCUM EQUAL FFFF	3A1026
	•	3A1026
	•	3A1026
044 0 01F5	DC A1DO EOR	3A1026
	* FFFF N/A N/A N/A N/A BEFORE EOR	3A1026
	* FFFF N/A N/A N/A N/A N/A S/B AFTER	3A1026
	* WITH ACCUM EQUAL FFFF AN EOR USING 0000 DID	3A1027
	* NOT RESULT IN ACCUM EQUAL FFFF	3A1027
	. WO. HEADEL THE MAAN. PAGE	3A1027
	•	381027

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ADDRESS	▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗▗ ▗	*3A102740 3A102750
OF	•	3A102760
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A102770
3045 0 01F5	***************************************	
3045 0 0175	DC A1DO SRA & EOR * 7FFF N/A N/A N/A N/A S/B AFTER SRA	3A102790
	* 7FFF N/A N/A N/A N/A N/A S/B AFTER SRA * 0000 N/A N/A N/A N/A N/A S/B AFTER EOR	
	* WITH ACCM EQUAL 7FFF AN EOR USING 7FFF DID NCT	3A102820
	* BESULT IN ACCUM EQUAL TO 0000	3A102830
	* RESULT IN ACCH EQUAL TO 0000	3A102840
3046 0 0214	DC A1EO LD LONG FGRM	3A102850
3048 0 0214		3A102860 3A102870
	* ACCUM NOT EQUAL DODO-INDICATING WRONG	3A102880
	* LOCATION WAS LOADED	3A102890
	•	3A102900
30/7 0 031/	*	3A102910
3047 0 0214	DC Aleo LD LONG FORM * C.NIEO. N/A N/A N/A N/A N/A S/B AFTER LD	3A102920
	* 0000 N/A N/A N/A N/A N/A S/B AFTER EDR	3A102930
	* ACCUM NET EQUAL GOOD INDICATING WRONG LOCATION	3A102950
	* WAS LOADED	3A102960
		3A102970
3048 0 0220	DC A1FO LD IND	3A102980
3049 0 0220	DC A1FO LD IND	3A102990 3A103000
	* 0000 N/A N/A N/A N/A S/B FOR BSC	3A103010
	* ACCUM NOT EQUAL ODOO INDICATING WRONG	3A103020
	* LOCATION WAS LOADED	3A103030
		3A103040
304A 0 022D	DC A200 BSC LONG FORM	3A103050
30.12 0 0220		3A103060 3A103070
	*	3A103080
		3A103090
304B 0 022D	A MARKET TOWNS AND A CHARLES AND A CHARLES	3A103100
	* UNCONDITIONAL BSC SKIPPED-SHOULD BRANCH *	3A103110
		3A103120 3A103130
304C 0 022D	DC A200 BSC,E LONG FORM	3A103140
304D 0 022D	DC A200	3A103150
	* FFFF N/A N/A N/A N/A	3A103160
		3A103170
	* DID NOT SKIP OR SKIPPED - SHOULD BR.	3A103180
304E 0 022D	DC A200 BSC,& LONG FORM	3A103190 3A103200
304F 0 022D	DC A200	3A103210
	* FFFF N/A N/A N/A N/A N/A S/B AT TEST	3A103220
	* DID NOT SKIP OR SKIPPED - SHOULD BR.	3A103230
	•	3A103240 3A103250
3050 0 022D	DC A200 BSC, Z LONG FORM	3A103250
3051 0 022D	DC A200	3A103270
	* FFFF N/A N/A N/A N/A N/A S/B AT TEST	3A103280
	* BSC DID NOT SKIP OR SKIPPED - SHOULD BR.	3A103290
	*	3A103300
3052 0 022D	DC A200 BSC,- LONG FORM	3A103310
· = = •	A PERF. MAA. MAA. MAA.	3A103320 3A103330
	* BSC BRANCHED-SHOULD NOT	3A103340
	•	3A103350
2052 0 0220	* DC 4300 DCC C 4000 DDC	3A103360
3053 0 022D 3054 0 022D	DC A200 BSC.C LONG FORM DC A200	3A103370
V VEED	- MAA - MAA	3A103380
•	TO DEC DED MOT CHILD OF ANYTHING	3A103390 3A103400
	A	3A103410

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ADDRESS	**************************************	3A1034
OF	•	3A1034
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	241024
***************	******************	**3A1034
3055 0 0220	DC A200 BSC.O LONG FORM	3A1034
3056 0 022D	DC A200	3A1034
	* N/A N/A N/A N/A N/A CEO S/B AT TEST	- 3A10349
	* BSC DID NOT SKIP OR SKIPPED-SHOULD BRANCH	341035
	*	3A1035
	•	3A1035
3057 0 022D	DC A200 BSC,O LONG FORM	3A1035
	* N/A N/A N/A N/A N/A C S/B AT TEST	3A1035
	* BSC FAILED TO TURN OFF OVERFLOW	3A1035
	•	3A1035
3058 0 022D	* PC 4200	3A1035
3038 0 0220	DC A200 BSC + C LONG FORM	3A1035
	* N/A N/A N/A N/A N/A OFF S/B AT TEST	3A1035
	* BSC BRANCHED-SHOULD NOT	3A1036
		3A1036
3059 0 022D		3A1036
3039 0 0220	DC A200 BSC.O LONG FORM * N/A N/A N/A N/A N/A DEF S/R AT TEST	3A1036
	* N/A N/A N/A N/A N/A OFF S/B AT TEST * BSC BRANCHED-SHOULD NOT	3A10364
	* pac bywycush-2400FD WO!	3A1036
	•	3A1036
05A 0 022D		3A1036
105B 0 022D	DC A200 BSC+&~ LONG FORM DC A200	3A1036
	* 0000 N/A N/A N/A N/A	3A10369
	* BSC DID NOT SKIP OR SKIPPED-SHOULD BRANCH	3A10370
	*	3A1037
	•	3A1037
05C 0 022D	DC A200 BSC,&- LONG FORM	3A10373
	* FFFF N/A N/A N/A N/A N/A S/B AT TEST	3A10374
	* BSC BRANCHED-SHOULD NOT	3A10375
	*	3A10376
	•	3A10377 3A10378
05D 0 022D	DC A200 BSC.E- LONG FORM	3A10379
	* 0001 N/A N/A N/A N/A N/A S/B AT TEST	3A10380
	* BSC BRANCHED SHOULD NOT	3A10381
	•	3A10382
	•	3A10383
05E 0 022D	DC A200 BSC INDIRECT	3A10384
05F 0 022D	DC A200	3A10385
	* BSC DID NOT SKIP OR SKIPPED-SHOULD BRANCH	3A10386
	•	3A10387
	•	3A10388
060 0 0270	DC A240 BSI	3410389
	* UNCONDITIONAL BSI DID NCT BRANCH	3A10390
	· •	3A10391
	•	3A10392
061 0 0270	DC A240 BSI	3A10393
	* UNCONDITIONAL BSI DID NOT STORE I CTR	3A10394
	* CORRECTLY	3A10395
		3A10396
		3A10397
062 0 0270	DC A240 BSI+& LONG FORM	3A10398
063 0 0270	DC A240	3A10399
	* 0000 N/A N/A N/A N/A N/A S/B AT TEST	3A10400
	* BSI DID NOT SKIP OR SKIPPED-SHOULD BRANCH	3A10401
	*	3A10402
044 0 0370	*	3A10403
064 0 0270	DC A240 BSI+& LONG FORM	3A10404
	* BSI DID NOT STORE THE I CTR CORRECTLY	3A10405
	*	3A10406
046 0 0202	* DC 4000 4000	3A10407
065 0 0282	DC A900 STORE * STORE INSTRUCTION FAILED	3A10408
	T STOKE INSTRUCTION FALLED	3A10409

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*************	*****************	34104100
ADDRESS	*	3A104110
OF	•	3A104120
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A104130
	**********************	3A104140
3066 0 0282	DC A900 XID SENSE/PROG SWS	3A104150
	* FFOO N/A N/A N/A N/A S/B AT TEST	3A104160
	* ACCUM NOT EQUAL TO FF00 SENSE/PROG SWS * WERE INCORRECTLY SENSED	3A104170 3A104180
	* WEKE INCORRECTLY SENSED	3A104190
3067 0 0282	DC A900 XIO DATA ENTRY SWS	3A104200
	* FFOO N/A N/A N/A N/A N/A S/B AT TEST	3A104210
	* ACCUM NOT EQUAL TO FFFF DATA ENTRY SWS	3A104220
	* WERE INCORRECTLY READ	3A104230
	* -	3A104240
3068 0 0282	DC A900 XIO SENSE/PROG SWS	3A104250
3000 0 0202	DC A900 XIO SENSE/PROG SWS * FF00 N/A N/A N/A N/A S/B AT TEST	3A104260 3A104270
	* ACCUM NOT EQUAL TO 0000 SENSE/PROG SWS	3A104280
	* WERE INCORRECTLY SENSED	3A104290
	•	3A104300
		3A104310
3069 0 0282	DC A900 X10	3A104320
	* 0000 N/A N/A N/A N/A NT/B AT TEST	3A104330
	* ACCUM NOT EQUAL TO 0000DATA ENTRY SWS * WERE INCORRECTLY READ	3A104340 3A104350
	*	3A104360
	•	3A104370
	•	3A104380
	•	3A104390
	******************	3A104400
	+ THE FOLLOWING FORCES AND MANDLED BY THE	3A104410
	* THE FOLLOWING ERRORS ARE HANDLED BY THE * COMMON ERROR CONTROL ROUTINE. THE ID NUMBER	3A104420 3A104430
	* SHOWN FOR EACH ERROR WILL APPEAR IN BITS	3A104440
	* 5 THRU 15 OF THE WAIT INSTRUCTION.	3A104450
	•	3A104460
	***********************************	3A104470
2011 2 2000	*	3A104480
306A 0 02D8	DC A280 SRA 16 * FFFF N/A N/A N/A N/A S/B AFTER LD	3A104490
	* FFFF N/A N/A N/A N/A N/A S/B AFTER LD * 0000 N/A N/A N/A N/A S/B AFTER SRA	3A104500
	* ACCUM NOT ZERO	3A104520
	*	3A104530
		3A104540
306B 0 02E2	DC A281 SRA 15	3A104550
	* 8000 N/A N/A N/A N/A N/A S/B AFTER LD	3A104560
	* 0001 N/A N/A N/A N/A N/A S/B AFTER SRA * ACCUM NOT FOLIAL 0001	
	* ACCUM NOT EQUAL 0001	3A104580 3A104590
	•	3A104600
306C 0 02ED	DC A282 SRA 1	3A104610
	* AAAA N/A N/A N/A N/A S/B AFTER LD	
	* 5555 N/A N/A N/A N/A N/A S/B AFTER SRA	3A104630
	* ACCUM NOT EQUAL 5555	3A104640
	•	3A104650
306D 0 02F8	DC A283 SRA 1	3A104660 3A104670
	* 5555 N/A N/A N/A N/A S/B AFTER LD	3A104680
	* ZAAA N/A N/A N/A N/A S/B AFTER SRA	
	* ACCUM NOT EQUAL ZAAA	3A104700
	•	3A104710
306E 0 0303	DC 4284 CEDIEC OF CD4C-15	3A104720
2000 0 0303	DC A284 SERIES OF SRAS-15 * *TOTAL SHIFTS	3A104730 3A104740
	* 8000 N/A N/A N/A N/A S/B AFTER LD	3A104750
	* 0001 N/A N/A N/A N/A S/B AFTER SRA	
	* ACCUM NOT EQUAL 0001	3A104770

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±					
•					3A1048
* A-KEG U-KEG	XK-1	XK-2)	(R-3	STATUS	3A1048

					3A1048
	A2C0	AME)-MEM(3A1048 3A1048
					3A1048
		-			3A1048
			, _	WA THEN AND	3A1048
*					3A1048
					3A1049
DC	A2C4	ANE	D-MEM	ORY#FFFF	3A1049
¥ 0000 N/A	N/A	N/A	N/A	N/A	3A1049
* 0000 N/A	N/A	N/A	N/A	N/A	3A1049
* ACCUM NOT E	QUAL 000	00			3A1049
*					3A1049
			N/A	N/A	3A1049
	DUAL DOU)0			3A1050
					3A1050
•	A2CC	A Bu F	N_MEM	DOVACEC	3A1050
					3A1050
					3A1050 3A1050
			M/A	N/A	3A1050
*		•			3A1050
*					341050
DC	A300	OR-	-MEMOR	RY # 0000	3A1050
* 0000 N/A	N/A	N/A	N/A	N/A AFTER LDEOR	3A1051
# 0000 N/A	N/A	N/A	N/A	N/A AFTER EOR	3A1051
* ACCUM NOT E	QUAL DOD	00			3A1051
*					3A1051
					3A1051
DC	A302	OR-		RY#FFFF	3A1051
	N/A	N/A	N/A	N/A AFTER LD & OR	3A1051
	N/A		N/A	N/A AFTER EOR	3A1051
	QUAL FFF	F			3A1051
*					3A1051
•	4304	00.	MEMOI		3A1052
			_		3A1052
					3A1052
			N/A	N/A AFIER EUR	3A1052
# ACCOM ROTE	BOAL FIF				3A1052
*					3A1052
, ,	A340	RTI	F 16		3A1052
				N/A REFORE RIF	3A1052
	-				3A1052
					3A1053
*		-			3A1053
*					3A1053
DC	A340	RTE	E 16		3A1053
* 0000 FFFF	N/A	N/A	N/A	N/A BEFORE RTE	3A1053
* FFFF 0000	N/A	N/A	N/A	N/A AFTER RTE	3A1053
	DUAL FFF	F			3A1053
*					3A1053
*					3A1053
DC	A380	-			3A1053
* 8000 N/A	N/A	N/A	N/A	N/A BEFORE SRT	3A1054
	N/A	N/A	N/A	N/A AFTER SRT	3A1054
	QUAL FFF	F			3A1054
*					3A1054 3A1054
	**************************************	** DC A2CO * 0000 N/A N/A * 0000 N/A N/A * ACCUM NOT EQUAL OOC ** DC A2C4 * 0000 N/A N/A * 0000 N/A N/A * ACCUM NOT EQUAL OOC ** DC A2C8 * FFFF N/A N/A * 0000 N/A N/A * ACCUM NOT EQUAL OOC ** DC A3CC * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A300 * 0000 N/A N/A * ACCUM NOT EQUAL FFF ** DC A302 * 0000 N/A N/A * ACCUM NOT EQUAL FFF ** DC A304 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A304 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A304 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A304 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A304 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A340 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A340 * FFFF OOOO N/A * ACCUM NOT EQUAL FFF ** DC A340 * FFFF OOOO N/A * ACCUM NOT EQUAL FFF ** DC A340 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A340 * FFFF N/A N/A * ACCUM NOT EQUAL FFF ** DC A380 * OOOO N/A N/A * FFFF FFFF N/A N/A * ACCUM NOT EQUAL FFF	DC A2CO ANE ***********************************	# DC A2CO AND-MEMO # 0000 N/A N/A N/A N/A # 0000 N/A N/A N/A N/A # ACCUM NOT EQHAL 0000 # DC A2C4 AND-MEMO # 0000 N/A N/A N/A N/A # 0000 N/A N/A N/A N/A # 0000 N/A N/A N/A N/A # ACCUM NOT EQUAL 0000 # DC A2C8 AND-MEMO # FFFF N/A N/A N/A N/A N/A # 0000 N/A N/A N/A N/A N/A # ACCUM NOT EQUAL 0000 # DC A2CC AND-MEMO # FFFF N/A N/A N/A N/A N/A # FFFF N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A300 OR-MEMO # 0000 N/A N/A N/A N/A N/A # ACCUM NOT EQUAL D000 # DC A302 OR-MEMO # 0000 N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A302 OR-MEMO # FFFF N/A N/A N/A N/A N/A # FFFF N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A304 OR-MEMO # FFFF N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A340 RTE 16 # FFFF N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A340 RTE 16 # FFFF N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A340 RTE 16 # FFFF O000 N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A340 RTE 16 # FFFF O000 N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A340 RTE 16 # FFFF O000 N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A380 SRT 32 # B000 N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A380 SRT 32 # B000 N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A380 SRT 32 # B000 N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF # DC A380 SRT 32 # B000 N/A N/A N/A N/A N/A N/A # ACCUM NOT EQUAL FFFF	DC A2CO AND-MEMORY#0000 * 0000 N/A N/A N/A N/A N/A S/B AFTER LD * 0000 N/A N/A N/A N/A N/A AFTER AND * ACCUM NOT EQIAL 0000 * DC A2C4 AND-MEMORY#FFFF * 0000 N/A N/A N/A N/A N/A N/A * 0000 N/A N/A N/A N/A N/A N/A * ACCUM NOT EQUAL 0000 * DC A2C8 AND-MEMORY#0000 * FFFF N/A N/A N/A N/A N/A N/A * ACCUM NOT EQUAL 0000 * DC A2CC AND-MEMORY#FFFF * DC A2CC AND-MEMORY#FFFF * DC A2CC AND-MEMORY#FFFF * DC A2CC AND-MEMORY#FFFF * DC A300 OR-MEMORY#FFFF * DC A302 OR-MEMORY#FFFF * O000 N/A N/A N/A N/A N/A AFTER EOR * ACCUM NOT EQUAL DODO * ACCUM NOT EQUAL DODO * O000 N/A N/A N/A N/A N/A AFTER EOR * ACCUM NOT EQUAL FFFF * DC A304 OR-MEMORY#FFFF * DC A304 OR-MEMORY#FFFF * OCO N/A N/A N/A N/A N/A AFTER EOR * ACCUM NOT EQUAL FFFF * DC A300 OR-MEMORY#FFFF * OCO N/A N/A N/A N/A N/A AFTER EOR * ACCUM NOT EQUAL FFFF * DC A304 OR-MEMORY#FFFF * DC A306 OR-MEMORY#FFFF * DC A307 OR-MEMORY#FFFF * DC A308 OR-MEMORY#FFFF * DC A308 OR-MEMORY#FFFF * DC A340 RTE 16 * FFFF O000 N/A N/A N/A N/A N/A AFTER RTE * ACCUM NOT EQUAL FFFF * DC A340 RTE 16 * FFFF O000 N/A N/A N/A N/A N/A AFTER RTE * ACCUM NOT EQUAL FFFF * DC A340 RTE 16 * O000 FFFF N/A N/A N/A N/A N/A AFTER RTE * ACCUM NOT EQUAL FFFF * DC A340 RTE 16 * O000 FFFF N/A N/A N/A N/A N/A AFTER SRT * ACCUM NOT EQUAL FFFF * DC A340 RTE 16 * O000 FFFF N/A N/A N/A N/A N/A AFTER SRT * ACCUM NOT EQUAL FFFF

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***********	*****************	3A105460
ADDRESS		3A105470
OF	*	3A105480
B-REG ROUTINE		3A105490
*************	*************	
	· •	3A105510
3079 0 0380	DC #300 3R1 32 4 R12 20	3A105520
	* 8000 N/A N/A N/A N/A BEFORE SRT	3A105530
	* FFFF FFFF N/A N/A N/A AFTER SRTERTE	
	* ACCUM NOT EQUAL FFFF-INDICATING Q REG FAILED	3A105550
	•	3A105560
	*	3A105570
307A 0 0395	DC A384 SRT 32	3A105580 3A105590
	* 4000 N/A N/A N/A N/A AFTER LD	3A105590
	* 0000 0000 N/A N/A N/A AFTER SRT	3A105610 ·
	* ACCUM NOT EQUAL 0000	3A105620
	*	3A105630
2022 0 0205	DC A384 SRT 32 & RTE 16	3A105640
307B 0 0395		3A105650
	* 4000 N/A N/A N/A N/A N/A AFTER LD * 0000 0000 N/A N/A N/A N/A AFTER SRT	3A105660
	* ACCUM NOT EQUAL ODOO-INDICATING Q REG FAILED	3A105670
	* ACCOM NOT EGONE ODGO-INDICATING & NEG TATELS	3A105680
	•	3A105690
307C U 03A8	DC A388 SRT 15	3A105700
3070 3 0380	* 5555 N/A N/A N/A N/A AFTER LD	3A105710
	* OOOO AAAA N/A N/A N/A AFTER SRT	3A105720
	* ACCUM NOT EQUAL 0000	3A105730
	*	3A105740
	•	3A105750
307D 0 03A8	DC A388 SRT 15 & RTE 16	3A105760
	+ 5555 N/A N/A N/A N/A AFTER LD	3A105770
	* 0000 AAAA N/A N/A N/A AFTER SRT 15	3A105780
	* AAAA 0000 N/A N/A N/A N/A AFTER RTE 16	3A105790
	* ACCUM NOT EQUAL AAAA-INDICATING Q REG FAILED	3A105800
. /	•	3A105810
	*	3A105820
307E 0 03BC	DC A38C SERIES OF SRTS-30	3A105830
•	* *TOTAL SHIFTS	3A105840
	* 5555 N/A N/A N/A N/A AFTER LD	3A105850
	* 0000 0001 N/A N/A N/A N/A AFTER SRT@S	3A105860
	* ACCUM NOT EQUAL 0000	3A105870
	•	3A105880 3A105890
	* DC 420C CEDIES DE SBTS-20	3A105900
307F 0 03BC	DC A38C SERIES OF SRTS-30 * *TOTAL SHIFTS &	3A105910
	* *TOTAL SHIFTS & * *RTE 16	3A105920
		3A105930
	* 5555 N/A N/A N/A N/A N/A AFTER LD * 0000 0001 N/A N/A N/A N/A AFTER SRT@S	3A105940
	* 0001 0000 N/A N/A N/A N/A AFTER RTE 16	3A105950
	* ACCUM NOT EQUAL OOO1-INDICATING Q REG FAILED	3A105960
	*	3A105970
	•	3A105980
3080 0 03DC	DC A3CO RTE 15	3A105990
3000 0 0300	* 5555 AAAA N/A N/A N/A AFTER LD@S	3A106000
	* 5554 AAAB N/A N/A N/A AFTER RTE 15	3A106010
	* ACCUM NOT EQUAL 5554 - RTE 15 Q TO A FAILED	3A106020
	•	3A106030
	•	3A106040
3081 O 03DC	DC A3CO RTE 15 & RTE 16	3A106050
	* 5555 AAAA N/A N/A N/A AFTER LDDS	3A106060
	* 5554 AAAB N/A N/A N/A AFTER RTE 15	3A106070
	* AAAB 5554 N/A N/A N/A AFTER RTE 16	3A106080
	* ACCUM NOT EQUAL AAAB-INDICATING Q REG FAILED	3A106090
	* •	3A106100
	*	3A106110
	• • • • • • • • • • • • • • • • • • •	3A106120 3A106130
		3M100130

***************		3A106140
ADDRESS 4		3A106150
0F *		3A106160
B-REG ROUTINE 4	A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A106170

3082 0 03F3	DC A3C4 SERIES OF RTES-31	3A106190
•		3A106200
	0000 8000 N/A N/A N/A N/A AFTER LD	3A106210
•	OOOL OOOO N/A N/A N/A N/A AFTER RTE@S	3A106220
1	ACCUM NOT EQUAL 0001	3A106230
	,	3A106240
•		3A106250
2002 0 0253	DC A3C4 SERIES OF RTES-31	3A106260
3083 0 03F3		
	*TOTAL SHIFTS	3A106270
•	TOPECHED DI RIE 10	3A106280
1	F 0000 8000 N/A N/A N/A N/A AFTER LD	3A106290
•	FOOOL OOOO N/A N/A N/A N/A AFTER RTEƏS	3A106300
1	F 0000 0001 N/A N/A N/A N/A AFTER RTE 16	3A106310
1	ACCUM NOT EQUAL 0000-INDICATING Q REG FAILED	3A106320
		3A106330
		3A106340
3084 0 0412	DC A400 SLA 16	3A106350
	FFFF FFFF N/A N/A N/A AFTER LD	3A106360
;	* 0000 FFFF N/A N/A N/A AFTER SLA	3A106370
1	ACCUM NOT EQUAL 0000	3A106380
:		3A106390
1		3A106400
3085 0 0412	DC A400 SLA 16	3A106410
	FFFF FFFF N/A N/A N/A OFF AFTER LD	3A106420
	* 0000 FFFF N/A N/A N/A C AFTER SLA	3A106430
•	CARRY NOT SET	3A106440
		3A106450
•		3A106460
3086 0 0412	DC A400 SLA 16 & RTE 16	3A106470
	FFFF FFFF N/A N/A N/A N/A AFTER LD	3A106480
	* 0000 FFFF N/A N/A N/A N/A AFTER SLA	3A106490
		3A106500
	* ACCUM NOT EQUAL FFFF-INDICATING Q REG FAILED	3A106510
	•	3A106520
	•	3A106530
3087 0 0433	DC A408 SLA 16	3A106540
	* 0001 0000 N/A N/A N/A N/A AFTER LD	3A106550
	* 0000 0000 N/A N/A N/A N/A AFTERSLA	3A106560
	* ACCUM NOT EQUAL 0000	3A106570
	*	3A106580
		3A106590
	*	
3088 0 0433	DC A408 SLA 16	3A106600
	* 0001 0000 N/A N/A N/A C AFTER LD	3A106610
	* 0000 0000 N/A N/A N/A C AFTER SLA	3A106620
	* CARRY NOT SET	3A106630
	•	3A106640
	· •	34106650
2000 0 0/22	DC A408 SLA 16 & RTE 16	3A106660
3089 0 0433		3A106670
	* 0001 0000 N/A N/A N/A N/A AFTER LD	
	* 0000 0000 N/A N/A N/A N/A AFTER SLA	3A106680
	* 0000 0000 N/A N/A N/A N/A AFTER RTE 16	3A106690
	* ACCUM NOT EQUAL OOOO-INDICATING Q REG FAILED	3A106700
	•	3A106710
	*	3A106720
2004 0 0/52		3A106730
308A 0 0453		3A106740
	* AAAA 0000 N/A N/A N/A N/A AFTER LD	
	* 5554 0000 N/A N/A N/A N/A AFTER SLA	3A106750
	* ACCUM NOT EQUAL 5554	3A106760
	•	3A106770
	•	3A106780
	•	3A106790
	•	3A106800
	*	3A106810
	•	3

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*************	**********************************	*3A106820
ADDRESS	•	3A106830
OF	•	3A106840
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A106850

3088 0 0453	DC 8400 SLA 1	3A106870
	* AAAA 0000 N/A N/A N/A C	3A106880
	* 5554 0000 N/A N/A N/A C	3A106890 3A106900
	* CARRY NOT SET	3A106910
	•	3A106920
308C 0 0453	DC 8400 SLA 1 & RTE 16	3A106930
3000 0 0433	* AAAA 0000 N/A N/A N/A N/A	3A106940
	* 5554 0000 N/A N/A N/A N/A	3A106950
	* 0000 5554 N/A N/A N/A AFTER RTE	3A106960
	* ACCUM NOT EQUAL OCCO-INDICATING Q REG FAILED	3A106970
	•	3A106980
	•	3A106990
308D 0 0471	DC 8406 SLA 1	3A107000
	* 5555 0000 N/A N/A N/A AFTER LD	3A107010
	* AAAA 0000 N/A N/A N/A N/A AFTER SLA	3A107020
	* ACCUM NOT EQUAL AAAA	3A107030
	•	3A107040
	•	3A107050
308E 0 0471	DC 8406 SLA 1	3A107060
	* 5555 0000 N/A N/A N/A C AFTER LD	3A107070
	* AAAA OCOO N/A N/A N/A OFF AFTER SLA	3A107080 3A107090
	* CARRY SET-SHOULD BE CLEAR	3A107100
	*	3A107110
308F 0 0471	DC 8406 SLA 1 & RTE 16	3A107120
500. 0 04.1	* 5555 000U N/A N/A N/A AFTER LD	3A107130
	* AAAA OOOO N/A N/A N/A N/A AFTER SLA	3A107140
	* 0000 AAAA N/A N/A N/A N/A AFTER RTE	3A107150
	* ACCUM NOT EQUAL DODO-INDICATING Q REG FAILED	3A107160
		3A107170 /
	•	3A107180
3090 0 049 0	DC B40A SERIES OF SLAS-16	3A107190
	* *TOTAL SHIFTS	3A107200
	* 0001 0000 N/A N/A N/A N/A AFTER SLA 0	3A107210
	* 0000 0000 N/A N/A N/A N/A AFTER SLASS	3A107220;
	* ACCUM NOT EQUAL 0000	3A107230
	* · · · · · · · · · · · · · · · · · · ·	3A107240 3A107250
3091 0 0490	DC B40A SERIES OF SLAS-16	3A107260
3071 0 0470	* *TOTAL SHIFTS	3A107270
	* 0001 0000 N/A N/A N/A C AFTER SLA 0	3A107280
	* 0000 0000 N/A N/A N/A C AFTER SLADS	3A107290
	* CARRY NOT SET	3A107300
	•	3A107310
	•	3A107320
3092 0 0490	DC B40A SERIES OF SLAS-16	3A107330
	* *TOTAL SHIFTS &	3A107340
	* *RTE 16	3A107350
	* 0001 0000 N/A N/A N/A N/A AFTER SLA 0	3A107360
	* 0000 0000 N/A N/A N/A AFTER SLASS	3A107370
	* 0000 0000 N/A N/A N/A N/A AFTER RTE 16	3A107380
	* ACC NOT EQUAL 0000-INDICATING Q REG FAILED	3A107390 3A107400
	•	3A107410
3093 0 04BD	DC A440 SLT 32	3A107420
2072 0 0 000	* 0000 0001 N/A N/A N/A AFTER LD	3A107430
	* 0000 0000 N/A N/A N/A N/A AFTER SLT 32	3A107440
	* ACCUM NOT EQUAL 0000	3A107450
	•	3A107460
	•	3A107470
	•	3A107480
	•	3A107490

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ADDRESS OF	*	3A107
	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A1079
	*****************************	*3A107
094 0 04BD	DC A440 SLT 32	3A107
	* 0000 0001 N/A N/A N/A N/A AFTER LD	3A107
	* 0000 0000 N/A N/A N/A C AFTER SLT 32	
	* CARRY NOT SET	3A107
	*	3A107
3005 0 0/00	*	3A107
3095 O 04BD	DC A440 SLT 32 & RTE 16	3A107
		3A107
	* 0000 0000 AFTER SLT 32 * 0000 0000 AFTER RTE 16	
	* ACCUM NOT EQUAL 0000-INDICATING Q REG FAILED *	3A107
	*	3A107
3096 0 04DA	> DC A444 SLT 16 ;	3A107 3A107
3070 U U 1 UA	* 0000 FFFF N/A N/A N/A AFTER LD	
	* FFFF 0000 N/A N/A N/A N/A AFTER SLT 16	3A107
	* ACCUM NOT EQUAL FFFF	
	# ACCUM NUI EQUAL PPPP	3A107 3A107
	*	3A107
3097 0 04DA	DC A444 SLT 16	
JUFF U UTUA	* 0000 FFFF N/A N/A N/A N/A AFTER LD	3A107 3A107
	* FFFF 0000 N/A N/A N/A OFF AFTER SLT 16	
	* CARRY ON SHOULD NOT BE	3A107
	* CARRY UN SHOULD NOT BE	3A107
	· · · · · · · · · · · · · · · · · · ·	3A107
3098 0 04DA	DC A444 SLT 16 & RTE 16	3A107
2070 U U7UA	* 0000 FFFF N/A N/A N/A N/A AFTER LD	3A107
	* FFFF 0000 N/A N/A N/A N/A AFTER SLT 16	
	* 0000 FFFF N/A N/A N/A N/A AFTER RTE 16	
	* ACCUM NOT EQUAL OOOO-INDICATING Q REG FAILED	3A107
	*	3A107
		3A107
3099 0 04F9	DC A44A SLT 15	3A107
2077 U U7F7	* 0000 5555 N/A N/A N/A N/A AFTER LD	3A107
	* 2AAA 8000 N/A N/A N/A N/A AFTER SLT 15	
	* ACCUM NOT EQUAL ZAAA	3A107
	* ACSON NOT ENONE ENAN	3A107
		3A107
309A 0 04F9	DC A44A SLT 15	3A107
3072 0 0417	* 0000 5555 N/A N/A N/A N/A AFTER LD	3A107
	* 2AAA 8000 N/A N/A N/A OFF AFTER SLT 15	
	* CARRY SET-SHOULD NOT BE	3A107
	* CARRI 3E1-3000ED NOT BE	3A107
	•	3A107
309B 0 04F9	DC A44A SLT 15 & RTE 16	3A107
2070 O OTI7	* 0000 5555 N/A N/A N/A N/A AFTER LD	3A108
	* 2AAA 8000 N/A N/A N/A N/A AFTER SLT 15	
	* 8000 2AAA N/A N/A N/A N/A AFTER RTE 16	3A108
		3A108
	*	3A108
	• •	3A108
309C 0 0519	DC 8440 SERIES OF SLTS-32	3A108
, , , U U J17	* * **********************************	3A108
	* 0000 0001 N/A N/A N/A N/A AFTER LD	3A108
	* 0000 0000 N/A N/A N/A N/A AFTER SLTAS	3A108
	* ACCUM NOT EQUAL OCCO	3A108
	* ACCOM NOT EQUAL DOOD	3A108
		3A108
2000 0 0510	DC B440 SERIES OF SLTS-32	3A108
309D 0 0519	* * *TOTAL SHIFTS	3A108
	* 0000 OCO1 N/A N/A N/A AFTER LD	3A108
	* 0000 0001 N/A N/A N/A R/A AFTER ED	3A108
	* CARRY NOT ON	3A108
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*************	********************	34108180
ADDRESS		3A108190
		3A108200
	★ A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A108210
**********	*******************	3A108220
309E 0 0519	DC B440 SERIES OF SLTS-32	3A108230
	* *10TAL SHIFTS &	3A108240
	* *RTE 16	3A108250
	* 0000 0001 N/A N/A N/A AFTER LD	3A108260
	♥ 0000 0000 N/A N/A N/A N/A AFTER SLTƏS ♥ 0000 0000 N/A N/A N/A N/A AFTER RTE 16	3A108270 3A108280
	* ACCUM NOT EQUAL OCCO-INDICATING O REG FAILED	3A108290
	#	3A108300
:	•	3A108310
309F 0 0542	DC A480 STO	3A108320
	* 0000 N/A N/A N/A N/A	3A108330
	* STORING 0000 INTO A STORAGE LOCATION	3A10B340
	* CONTAINING FFFF DID NOT RETURN 0000 WHEN	3A108350
	* RELOADED IN THE ACCUM	3A108360
		3A108370 3A108380
30A0 0 054E	DC A482 STO	3A108390
	* FFFF N/A N/A N/A N/A	3A108400
	* STORING FFFF INTO A STORAGE LOCATION	3A108410
:	CONTAINING 0000 DID NOT RETURN FFFF WHEN	3A108420
	* RELOADED IN THE ACCUM	3A108430
		3A108440
	*	3A108450
30A1 0 055F	DC A4CO STS * N/A N/A N/A N/A N/A ON AFTER LDS 3	3A108460 3A108470
	* N/A N/A N/A N/A N/A OFF AFTER LDS O	3A108480
	* N/A N/A N/A N/A N/A OFF AFTER STS	3A108490
	* LDS O FAILED TO RESET CARRY AND UVERFLOW OR	3A108500
	* STS FAILED TO STORE INDICATORS.	3A108510
	•	3A108520
	•	3A108530
30A2 0 056E	DC A4C2 STS	3A108540
	* N/A N/A N/A N/A N/A C&O AFTER LDS	3A108550
	♥ N/A N/A N/A N/A OFF AFTER STS ♥ STS DID NOT CLEAR CARRY	3A108560 3A108570
	+ 313 DID NOT CLEAR CARRY	3A108580
	•	3A108590
30A3 0 056B	DC A4C2 STS CK ACC	3A108600
	* INITIALLY ACC HAS CORE LOCATION OF	3A108610
	* SYMBOLIC LABEL A4C2	3A108620
	* ACC DISTROYED AFTER STS	3A108630
	* *	3A108640 3A108650
30A4 0 056B	DC A4C2 STS	3A108660
3044 0 0308	* N/A N/A N/A N/A N/A CEO AFTER LDS	3A108670
	* N/A N/A N/A N/A N/A OFF AFTER STS	3A108680
	* STS DID NOT CLEAR OVERFLOW	3A108690
	•	3A108700
	•	3A108710
30A5 0 056B	DC A4C2 STS	3A108720
	* N/A BEFORE LD * 0003 AFTER LD	3A108730 3A108740
	* STS OF 0003 INTO A STORAGE LOCATION	3A108750
	* CONTAINING 0000 DID NOT RETURN 0003 WHEN	3A108760
	* RELOADED IN THE ACCUM	3A108770
		3A108780
3046 0 0590	DC A4C8 STS	3A108790
	* N/A N/A N/A N/A N/A CEO AFTER LDS 3	3A108800
	* N/A N/A N/A N/A N/A C AFTER LDS 2	3A108810
	* N/A N/A N/A N/A N/A OFF AFTER STS	3A108820
	* 0002 N/A N/A N/A N/A OFF AFTER LD * STS FAILED TO STORE OR LDS 2 FAILED TO RESET	3A108830 3A108840
	* OVERFLOW.	3A108850
	— · — · · · - • • · · · •	

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ADDRESS	*	3A108870
OF	• • · · · · · · · · · · · · · · · · · ·	3A108880
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	34108890
******	************************	*3A108900
30A7 0 0590	DC A4C8 STS	3A1C8910
	* N/A N/A N/A N/A N/A C&O AFTER LDS 3	
		3A108930
	* N/A N/A N/A N/A N/A OFF AFTER STS	3A108940
	* STS DID NOT CLEAR CARRY OR OVERFLOW IF OVERFLOW * HAD NOT BEEN RESET BY LDS 2	3A108950
	* HAD HOT BEEN KESEL BY EDS 2	3A108960 3A108970
30A8 0 05A7	DC A4CC STS	3A108980
30.0 0 03	* N/A N/A N/A N/A N/A CEO AFTER LDS 3	
	* N/A N/A N/A N/A N/A D AFTER LDS 1	3A109000
	* N/A N/A N/A N/A N/A OFF AFTER STS	3A109010
	* LDS 1 FAILED, IF ACCUMULATOR IS OTHER THAN /0001	3A109020
	*	3A109030
	•	3A109040
30A9 0 05A7	DC A4CC STS	3 A 109050
	* N/A N/A N/A N/A N/A CED AFTER LDS 3	
	* N/A N/A N/A N/A D AFTER LDS 1	3A109070
	* N/A N/A N/A N/A DFF AFTER STS	3A109080
	* STS FAILED TO RESET INDICATORS.	3A109090
		3A109100
	•	3A109110 3A109120
30AA 0 05C4	DC A500 BSC.OEEZC	3A109120
3044 0 0 204	* 8001 N/A N/A N/A CED	3A109140
	* BSC SKIPPED-SHOULD NOT HAVE	3A109150
	*	3A109160
	•	3A109170
3/0AB 0 05CF	DC A502 BSC,-DC&	3A109180
/	* 0000 N/A N/A N/A CCO	3A109190
	* BSC SKIPPED-SHOULD NOT HAVE	3A109200
I	•	3A109210
	*	3A109220
30AC 0 05DA	DC A504 BSC,0-E	3A109230
	* 8000 N/A N/A N/A C&O	3A109240
	* BSC FAILED TO SKIP	3A109250 -3A109260
	•	3A109270
30AD 0 05DA	DC A504 BSC+D	3A109280
3020 0 0302	* 8000 N/A N/A N/A C	3A109290
	* BSC FAILED TO CLEAR OVERFLOW	3A109300
	•	3A109310
30AE 0 05F1	DC A508 BSC,C&Z	3A109320
	* 0001 N/A N/A N/A DFF	3A109330
	* BSC FAILED TO SKIP	3A109340
	•	3A109350
	*	3A109360
30AF 0 05FC	DC A50A BSC, &OCE LONG FORM	3A109370
	* 8001 N/A N/A N/A CED	3A109380 3A109390
	* BSC DID NOT BRANCH - SHOULD HAVE	3A109400
	•	3A109410
30BO 0 05FC	DC A50A BSC+&OCE LONG FORM	3A109420
3000 0 03.0	* 8001 N/A N/A N/A CEO	3A109430
	* BSC SKIPPED-SHOULD BRANCH	3A109440
	*	3A109450
	•	3A109460
30B1 0 0619	DC A5OC BSC,-Z LONG FORM	3A109470
	+ 0004 N/A N/A N/A CED	3A109480
	* BSC DID NOT BRANCH - SHOULD HAVE	3A109490
	*	3A109500
	*	3A109510
30B2 0 0619	DC A50C BSC+-Z LONG FORM	3A109520
	* 0004 N/A N/A N/A C&D	3A109530

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	* BSC SKIPPED-SHOULD BRANCH	3A109540
**********	*******************	
ADDRESS	*	3A109560
OF	· •	3A109570
A-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A109580
*******	**************	***3A109590
	*	3A109600
	*	3A109610
30B3 0 062D	DC ASOE BSC. EEDCZ LONG	3A109620
,,,,,	* *FORM	3A109630
	* 8001 N/A N/A N/A N/A CED	3A109640
	* BSC BRANCHED-SHOULD NOT	3A109650
	•	3A109660
	•	3A109670
3084 0 062D	DC A50E BSC+&EOCZ LONG	3A109680
	* *FORM	3A109690
	* 8001 N/A N/A N/A C&D	3A109700
	* BSC SKIPPED-SHOULD NOT	3A1U9710
	•	3A109720
	*	3A109730
30B5 0 0641	DC 8500 8SC+&	3A109740
	* 0001. N/A N/A N/A CEO	3A109750
	* BSC ON PLUS CLEARED THE OVERFLOW F-F	3A109760
	•	3A109770
	*	3A109780 3A109790
30B6 0 0641	DC B500 BSC+&	3A109800
	* 0001 N/A N/A N/A N/A N/A	3A109810
	* BSC FAILED TO SKIP	3A109820
	•	3A109830
	* nct conet 1000	3A109840
30B7 0 0660	DC A540 BS1,ECOEZ LONG * *FORM	3A109850
	·	3A109860
	1 0001 11/H 11/H 11/H 11/H	3A109870
	* BS1 DID NOT BRANCH - SHOULD HAVE	3A109880
	•	34109890
	· · · · · · · · · · · · · · · · · · ·	3A109900
3088 0 0 560	DC A540 BS1,ECO&Z LONG * *FORM	3A109910
	* 8001 N/A N/A N/A CEO	3A109920
	* BSI SKIPPED-SHOULD BRANCH	3A109930
	# P21 2KILLED-2MOOFD DWWG!!	3A109940
		3A109950
30B9 0 0660	DC A540 BS1,ECO&Z LONG	3A109960
3089 0 0000	* *FORM	3A109970
	* 8001 N/A N/A N/A N/A CEO AFTER LDS	3A109980
	* 8001 N/A N/A N/A N/A C AFTER BSI	3A109990
	* BSI DID NOT CLEAR OVERFLOW	3A110000
	*	3A110010
	•	3A110020
308A 0 0681	DC A544 BSI,Z- LONG FORM	3A110030
3004 0 0001	+ 0002 N/A N/A N/A N/A N/A	3A110040
	* BSI DID NOT BRANCH - SHOULD HAVE	3A110050
	*	3A110060
	•	3A110070
30BB 0 0681	DC A544 BSI+Z- LONG FORM	3A110080
2420 A A001	* 0002 N/A N/A N/A N/A N/A	3A110090
	* BSI SKIPPED-SHOULD BRANCH	3A110100
	*	3A110110
	•	3A110120
3005 0 0404	DC ASAA RSI.7 LONG FORM	34110130

DC A546 BSI,Z LONG FOR

* 0000 N/A N/A N/A N/A N/A

* BSI BRANCHED-SHOULD NOT

DC A546 BSI+Z LONG FO

* BSI SKIPPED-SHOULD NOT

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BSI, Z LONG FORM

BSI.Z LONG FORM

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ADDRESS		34110240
	•	3A110240
Oi	* * * * * * * * * * * * * * * * * * *	3A110250
	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A110260

30BE 0 06A9	DC A548 BSI+- LONG FORM	3A110280
	* 8001 N/A N/A N/A N/A	3A110290
	* BSI SKIPPED-SHOULD NOT	3A110300
	•	3A110310
	•	3A110320
30BF 0 06A9	DC A548 BSI,- LONG FORM	3A110330
	* 8001 N/A N/A N/A N/A	3A110340
	◆ BSI BRANCHED-SHOULD NOT	3A110350
	*	3A110360
30C0 0 06BB	DC A54A BSI+& LONG FORM	3A110370
	* 0002 N/A N/A N/A N/A	3A110380
	* BSI SKIPPED-SHOULD NOT	3A110390
	*	3A110400
	*	3A110410
30C1 0 068B	DC A54A BSI,& LONG FORM	3A110420
	* 0002 N/A N/A N/A N/A N/A	3A110430
	* BSI BRANCHED-SHOULD NOT	3A110440
	*	3A110450
	•	3A110460
30C2 0 06CD	DC A54C BSI+E LONG FORM	3A110470
3002 0 0000	* 0002 N/A N/A N/A N/A	3A110480
	* BS1 SKIPPED-SHOULD NOT	3A110490
	* 831 2K1FFED-2HOOFD NO!	3A110500
	•	3A110510
2052 0 0/50		3A110520
30C3 0 06CD	DC A54C BSI,E LONG FORM * 0002 N/A N/A N/A N/A	3A110530
	* BSI BRANCHED-SHOULD NOT	3A110540
		3A110550
_	* •	3A110560
2001 2 2125	DC A54E BSI+C LONG FORM	3A110570
30C4 0 06DF		3A110580
	* N/A N/A N/A N/A C	3A110590
	* BSI SKIPPED-SHOULD NOT	3A110590
	•	
	* .	3A110610
30C5 0 06DF	DC A54E BSI+C LONG FORM	3A110620
	* N/A N/A N/A N/A C	3A110630
	* BSI BRANCHED SHOULD NOT	3A110640
	•	3A110650
	•	3A110660
30C6 0 06F1	DC A54F BSI,D LONG FORM	3A110670
	* N/A N/A N/A N/A D	3A110680
	* BSI SKIPPED-SHOULD NOT	3A110690
	*	3A110700
	*	3A110710
30C7 0 06F1	DC A54F BSI.O LONG FORM	3A110720
	* N/A N/A N/A N/A O	3A110730
	* BSI BRANCHED-SHOULD NOT	3A110740
	*	3A110750
	*	3A110760
30C8 0 070 4	DC A580 LDD	3A110770
	* 0000 0000 N/A N/A N/A N/A	3A110780
	* ACCUM NOT EQUAL 0000	3A110790
	*	3A110800
	•	3A110810
3009 0 0704	DC A580 LDD & RTE 16	3A110820
JUG7 U 0104	* 0000 0000 N/A N/A N/A N/A AFTER LDD	3A110830
	* 0000 0000 N/A N/A N/A N/A AFTER RTE 16	3A110840
	* ACCUM NOT EQUAL OCCO-INDICATING Q REG FAILED	3A110850
	*	3A110860
	*	3A110870
30CA 0 0717	DC A584 LDD	3A110880
SULA U UTIT	* FFFF FFFF N/A N/A N/A N/A	3A110890
	- 1111 1111 1110 1110 1110 1110	

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		* ACCUM NOT EQUAL FFFF	3A110900
*****	********	**************************************	
	ADDRESS	*	3A110920
	OF	•	3A110930
B-REG	ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A110940

30CB 0	0/1/	DC A584 LDD & RTE 16 * FFFF FFFF N/A N/A N/A N/A AFTER LDD	3A110960 3A110970
		* FFFF FFFF N/A N/A N/A N/A AFTER RTE 16	3A110970
		* ACCUM NOT EQUAL FFFF-INDICATING Q REG FAILED	3A110990
		*	3A111000
		•	3A111010
30CC 0	072B	DC A588 LDD QDD ADDRESS	3A111020
		* 0000 0000 N/A N/A N/A N/A	3A111030
		* ACCUM NOT EQUAL 0000	3A111040
		*	3A111050
30CD 0	072B	DC A588 LDD-ODD ADDRESS	3A111060 3A111070
3000 0	0726	* * & RTE 16	3A111070
		* 0000 0000 N/A N/A N/A N/A AFTER LDD	3A111090
		* 0000 0000 N.'A N/A N/A N/A AFTER RTE 16	3A111100
		* ACCUM NOT EQUAL 0000-INDICATING Q REG FAILED	3A111110
		•	3A111120
		•	3A111130
30CE 0	073D	DC A5CO STD	3A111140
		* 0000 0000 N/A N/A N/A N/A	3A111150
		* USING STD-ACCUM NOT STORED IN LOCATION EA	3A111160
			3A111170 3A111180
30CF 0	0730	DC A5CO STD	3A111190
300 . 0		* 0000 0000 N/A N/A N/A N/A	3A111200
		* USING STD-Q REG NOT STORED IN LOCATION EA&1	3A111210
		*	3A111220
		•	3A111230
30D0 0	0751	DC A5C4 STD	3A111240
		* FFFF FFFF N/A N/A N/A N/A	3A111250
		* USING STD-ACCUM NOT STORED IN LOCATION EA	3A111260
		*	3A111270
3001 0	0751	*	3A111280
30D1 0	0121	DC A5C4 STD * FFFF FFFF N/A N/A N/A	3A111290 3A111300
		* USING STD-Q REG NOT STORED IN LOCATION EASI	3A111310
		*	3A111320
		•	3A111330
30D2 0	076A	DC A5C8 STD ODD ADRESS	3A111340
		* 0000 0000 N/A N/A N/A N/A	3A111350
		* STD USING ODD ADDRESS-ACCUM NOT STORED IN EA	3A111360
		•	3A111370
30D3 O	0764	DC A5C8 STD-ODD ADDRESS	3A111380 3A111390
2003 0		* 0000 0000 N/A N/A N/A N/A	3A111390
		* SYD USING ODD ADDRESS-ACCUM NOT STORED	3A111410
		* IN EAG1	3A111420
		•	3A111430
		•	3A111440
30D4 0	078F	DC A600 LDX 1	3A111450
		* N/A N/A N/A N/A N/A	3A111460
		* TAG REG BIT 7 WILL NOT SET	3A111470
			3A111480
3005 0	0798	DC A602 LDX 2	3A111490
200, 0		* N/A N/A N/A N/A N/A	3A111500 3A111510
		* TAG REG BIT 6 WILL NOT SET	3A111520
		*	3A111530
		•	3A111540
30D6 O	07A1	DC A604 LDX 1	3A111550
		* N/A N/A 0000 N/A N/A N/A	3A111560
		+ INDEX DEC 1 NOT FOUND AGOD	24111572
		* INDEX REG 1 NOT EQUAL 0000	3A111570

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******	********	* **********************	3A111580
	ADDRESS	*	
	OF	•	3A111600 3A111610
B-REG	ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A111620
******	*******	*************************	05011145
3007 0		DC A606 LDX 2	3A111640
		* N/A N/A N/A 0000 N/A N/A	3A111650
		* INDEX REG 2 NOT EQUAL 0000	3A111660
		•	3A111670
		•	3A111680
30D8 0	07BA	DC A608 LDX 3	3A111690
		* N/A N/A N/A 0000 N/A	3A111700
		* INDEX REG 3 NOT EQUAL 0000	3A111710
		*	3A111720
3000 0	0767	*	3A111730
30D9 0	0707	DC A60A LDX 1	3A111740
		* N/A N/A FFFF N/A N/A N/A * INDEX REG I NOT FOULL FFFF	3A111750
		* INDEX REG 1 NOT EQUAL FFFF	3A111760
		•	3A111770
30DA 0	0.704	DC A6OC LDX 2	3A111780
JUUR 0	0104	* N/A N/A N/A FFFF N/A N/A	3A111790 3A111800
		* INDEX REG 2 NOT EQUAL FFFF	3A111810
		*	3A111820
		•	3A111830
30DB 0	07E1	DC AGGE LDX 3	3A111840
		* N/A N/A N/A FFFF N/A	3A111850
		* INDEX REG 3 NOT EQUAL FFFF	3A111860
		•	3A111870
		•	3A111880
30DC 0	07EE	DC B600 LDX 1 LONG FORM	3A111890
		* N/A N/A 0001 N/A N/A N/A	3A111900
		* INDEX REG 1 NUT EQUAL 0001	3A111910
		•	3A111920
3000 0	0755	*	3A111930
30DD 0	UTFC	DC B602 LDX 3 INDIRECT * N/A N/A N/A FFFF N/A	3A111940
		* N/A N/A N/A N/A FFFF N/A * INDEX REG 3 NOT EQUAL FFFF	3A111950
		* INDEX KER 2 HOLE FROME LLLL	3A111960 3A111970
		•	3A111980
30DE 0	0810	DC A640 STX	3A111990
		* N/A N/A N/A N/A N/A	3A112000
		* STX WITH NO TAG DID NOT STORE 1-CTR CORRECT	3A112010
		*	3A112020
		•	3A112030
30DF 0	0827	DC A642 STX 1	3A112040
		* N/A N/A 0000 N/A N/A N/A	3A112050
		* INDEX REG 1 WAS NOT STORED BY STX	3A112060
		•	3A112070
		•	3A112080
30E0 0	0834	DC A644 STX 2	3A112090
		* N/A	3A112100
		* INDEX REG 2 NOT STORED BY STX	3A112110
		•	3A112120
30E1 0	0841	DC A646 STX 3	3A112130 3A112140
JUL 1	0071	* N/A N/A N/A 0000 N/A	3A112150
		* INDEX REG 3 NOT STORED BY STX	3A112160
		* ************************************	3A112170
		*	3A112180
30E2 0	084E	DC A648 STX 1	3A112190
	_	* N/A N/A FFFF N/A N/A N/A	3A112200
		* INDEX REG 1 NOT STORED BY STX	3A112210
		•	3A112220
		•	3A112230
30E3 0	085C	DC A64A STX 2	3A112240
		* N/A N/A N/A FFFF N/A N/A	3A112250

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		* INDEX REG 2 NOT STORED BY STX	3A112260
*****	********	**************************************	
	ADDRESS	*	3A112280
	OF	•	3A112290
B-REG	ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A112300
******	*********	***********************	*3A112310
		•	3A112320
30E4 0	086A	DC A64C STX 3	3A112330
		* N/A N/A N/A M/A FFFF N/A * INDEX REG 3 NOT STORED BY STX	3A112340 3A112350
		+ INDEX KEG 3 NOT STOKED BY STA	3A112360
		•	3A112370
30E5 0	O8DC	DC A680 ADD	3A112380
		* FFFF N/A N/A N/A N/A C AFTER LD&LDS	3A112390
		* FFFF N/A N/A N/A C AFTER A	3A112400
	•	* ADD FFFF & OOOD TURNED ON OVERFLOW	3A112410
		*· *	3A112420
30E6 0	UBDC	DC A680 ADD	3A112430 3A112440
3000		* FFFF N/A N/A N/A N/A AFTER LD	3A112450
		* FFFF N/A N/A N/A N/A AFTER A	3A112460
		* ADD FFFF & 0000 FAILED TO EQUAL FFFF	3A112470
		•	3A112480
		•	3A112490
3087 0	D8F1	DC A684 ADD	3A112500
		* FFFF N/A N/A N/A N/A OFF AFTER LD&LDS * 0000 N/A N/A N/A N/A C AFTER A	3A112510
		* ADD FFFF & OOO1 DID NOT TURN ON CARRY	3A112520 3A112530
		* ADD FFFF G GOOT DID NOT TOKEN ON CARK!	3A112540
		•	3A112550
30E8 0	08F1	DC A684 ADD	3A112560
		* FFFF N/A N/A N/A N/A AFTER LD&LDS	3A112570
		* 0000 N/A N/A N/A N/A AFTER A	3A112580
		* ADD FFFF & 0001 DID NOT EQUAL 0000	3A112590
		•	3A112600
30E9 0		* DC A688 ADD	3A112610
3069 0	0704	* FFFF N/A N/A N/A N/A OFF AFTER LD&LDS	3A112620 3A112630
		* FFFF N/A N/A N/A N/A C AFTER A	3A112640
		* ADD FFFF & FFFF DID NOT TURN ON CARRY	3A112650
		•	3A112660
		•	3A112670
30EA 0	0904	DC A688 ADD	3A112680
		* FFFF N/A N/A N/A N/A N/A AFTER LD&LDS * FFFF N/A N/A N/A N/A AFTER A	3A112690
		* FFFF N/A N/A N/A N/A AFTER A * ADD FFFF & FFFF DID NOT EQUAL FFFE	3A112700 3A112710
		* ADD FFFF & FFFF DID NOT EMANT FFFE	3A112710
		•	3A112730
30EB 0	0918	DC A68C ADD	3A112740
		* 4000 N/A N/A N/A DFF AFTER LD	3A112750
		* 8000 N/A N/A O AFTER A	3A112760
		* ADD 4000 & 4000 DID NOT TURN ON OVERFLOW	3A112770
		*	3A112780
30EC 0	0018	* DC A68C ADD	3A112790
3020 0	0716	DC A68C ADD * 4000 N/A N/A N/A N/A	3A112800 3A112810
		* ADD 4000 & 4000 DID NOT EQUAL 8000	3A112820
		*	3A112830
		•	3A112840
30ED 0	D92C	DC 8680 ADD	3A112850
		* 8000 N/A N/A N/A N/A AFTER LD	3A112860
		* 0000 N/A N/A N/A N/A N/A AFTER A * ADD 8000 & 8000 NOT EQUAL 0000	3A112870
		* ADD 6000 & 6000 NOT EQUAL DOOD	3A112880 3A112890
		*	3A112900
30EE 0 (092C	DC 8680 ADD	3A112910
		* 8000 N/A N/A N/A N/A OFF AFTER LD	3A112920
		* 0000 N/A CEO AFTER A	3A112930

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*******	*******	3A112940
ADDRESS	************************	3A112950 3A112960
OF	· •	3A112970
B-REG ROUTINE	* A-REG O-REG XR-1 XR-2 XR-3 STATUS	34112980
************	*******************	***3A112990
	•	3A113000
	•	3A113010
30EF 0 092C	DC 8680 ADD	3A113020
	* 8000 N/A N/A N/A OFF AFTER LD	3A113030
	* 0000 N/A N/A N/A N/A UFF AFTER ED * 0000 N/A N/A N/A N/A C&O AFTER A * ADD 8000 & 8000 DID NOT TURN ON CARRY	3A113040
		3A113050
	•	3A113060
30F0 0 0954	DC A6CO LDX 1	3A113070
3010 0 0954	DC A6CO LDX 1 * N/A N/A FFF4 N/A N/A N/A * INDEX REG 1 WAS NOT LOADED EQUAL FFF4	3A113080
	* TATA TO THE TOTAL TO THE TOTAL TO THE TOTAL TO	3A113090 3A113100
	# INDEX KEG I WAS NOT COMPED ENOME FILE	3A113110
	•	34113130
30F1 0 0954	DC A6CO LD 1 * N/A N/A FFF4 N/A N/A N/A * A LOAD INSTR INDEXED BY INDEX REG 1 * LOADED THE WRONG LOCATION	34113150
	* N/A N/A FFF4 N/A N/A N/A	34113140
	* A LOAD INSTR INDEXED BY INDEX REG 1	34113150
	* LOADED THE WRONG LOCATION	3A113160
	*	34113180
30F2 0 096C	DC A6C2 > LDX 2	3A113190
	* N/A N/A N/A 0004 N/A N/A	3A113200
	* INDEX REG 2 NOT LOADED EQUAL 0004	3A113210
	•	3A113220
		3A113230
30F3 0 096C	DC A6C2 LD 2	3A113240
	* N/A N/A N/A 0004 N/A N/A	3A113250
	* A LOAD INSTR INDEXED BY INDEX REG 2	3A113260
	* LOADED THE WRONG LOCATION	3A113270
	•	3A113280
	•	3A113170 3A113180 3A113190 3A113200 3A113210 3A113220 3A113230 3A113240 3A113250 3A113260 3A113270 3A113280 3A113290
30F4 0 0984	DC ADCT LDA 3	3A113300 3A113310
	* N/A N/A N/A N/A 0000 N/A	
	* INDEX REG 3 NOT LOADED EQUAL 0000	3A113320
	•	3A113330 3A113340
30F5 0 0984	* DC A6C4 LD 3 * N/A N/A N/A N/A 0000 N/A * A LOAD INSTR INDEXED BY INDEX REG 3 * LOADED THE WRONG LOCATION	24112250
30. 3 0 0 304	* N/A N/A N/A N/A 0000 N/A	3A113350 3A113360
	* A LOAD INSTR INDEXED BY INDEX REG 3	3A113370
	* LOADED THE WRONG LOCATION	3A113380
	*	3A113390
	•	3A1134U0
30F6 0 099B	DC A6C6 LDX 3	3A113410
	* N/A N/A N/A N/A 0001 N/A	3A113420
	* INDEX REG 3 NOT EQUAL 0001	3A113430
	•	3A113440
	•	3A113450
30F7 0 099B	DC A6C6 LD 3 LONG FORM	3A113460 3A113470
	* N/A N/A N/A N/A 0001 N/A	3A113470
	* A LONG FORM LOAD INDEXED BY INDEX REG 3	3A113480
	* LOADED THE WRONG LOCATION	3A113490
•	•	3A113500
	•	3A113510
30F8 0 09B3	DC A6C8 LDX 3	3A113520
	* N/A N/A N/A FFFF N/A	3A113530
	* INDEX REG 3 NOT EQUAL FFFF	3A113540
	. .	3A113550
	* DC 44C0 ID 3 INDIDECT	3A113560
30F9 0 09B3	DC A6C8 LD 3 INDIRECT * N/A N/A N/A N/A FFFF N/A	3A113570 3A113580
	* N/A N/A N/A N/A FFFF N/A * AN INDIRECT LOAD INDEXED BY INDEX REG 3	3A113590
	* AN INDIRECT COAD INDEXED BY INDEX REG 5	3A113600
	*	3A113610

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* ADD 8000 & 8000 DID NOT TURN ON OVERFLOW

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	•	3A113620
**************	**************************************	
ADDRESS	•	3A113640
OF B-REG ROUTINE	≠ ≠ A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A113650 3A113660

30FA 0 0A38	DC A700 SUB	3A113680
	* 0000 N/A N/A N/A N/A AFTER LD	3A113690
	* FFFF N/A N/A N/A N/A AFTER S	3A113700
	* SUB 0001 FORM 0000 DID NOT EQUAL FFFF	3A113710 3A113720
	•	3A113730
30FB 0 0A38	DC A700 SUB	3A113740
	* 0000 N/A N/A N/A N/A OFF AFTER LD	3A113750
	* FFFF N/A N/A N/A N/A C AFTER S	3A113760
	* SUB 0001 FROM 0000 DID NOT SET CARRY *	3A113770 3A113780
	•	3A113790
30FC 0 0A4F	DC A704 SUB	3A113800
	* 0000 N/A N/A N/A N/A AFTER LD	3A113810
	* 0001 N/A N/A N/A N/A N/A AFTER S	3A113820
	* SUB FFFF FROM 0000 DID NOT EQUAL 0001	3A113830 3A113840
	•	3A113850
30FD 0 0A4F	DC A704 SUB	3A113860
	* 0000 N/A N/A N/A N/A OFF AFTER LD	3A113870
	* 0001 N/A N/A N/A C AFTER S	3A113880
	* SUB FFFF FROM 0000 DID NOT SET CARRY *	3A113890 3A113900
	•	3A113910
30FE 0 0A66	DC A708 SUB .	3A113920
	* 8000 N/A N/A N/A N/A AFTER LD	3A113930
	* 7FFF N/A N/A N/A N/A AFTER S * SUB 0001 FROM 8000 DID NOT FOUAL 7FFF	3A113940
	* SUB 0001 FROM 8000 DID NOT EQUAL 7FFF	3A113950 3A113960
	•	3A113970
30FF 0 0A66	DC A708 SUB	3A113980
	* 8000 N/A N/A N/A N/A OFF AFTER LD	3A113990
	* 0001 N/A N/A N/A N/A O AFTER CARRY * AND OVERFLOW CONDITION HAD BEEN LOADED INTO	3A114000 3A114010
	* ACCUMULATOR AS A NUMBER	3A114020
	* SUB OOC1 FROM 8000 DID NOT TURN ON OVERFLOW	3A114030
	•	3A114040
3100 0 0430	*	3A114050
3100 0 0A7D	DC A7OC SUB * OOGO N/A N/A N/A N/A AFTER LD	3A114060 3A114070
	* 8000 N/A N/A N/A N/A AFTER S	3A114080
	* SUB 8000 FROM 0000 DID NOT EQUAL 8000	3A114090
	•	3A114100
2101 0 0470	DC A70C SUB	3A114110
3101 0 0A7D	DC A70C SUB + 0000 N/A N/A N/A DFF AFTER LD	3A114120 3A114130
	* 8000 N/A N/A N/A N/A C&O AFTER S	3A114140
	* SUB 8000 FROM 0000 DID NOT TURN ON OVERFLOW	3A114150
	•	3A114160
3102 0 0A7D	DC A70C SUB	3A114170
3102 0 0410	* 0000 N/A N/A N/A OFF AFTER LD	3A114180 3A114190
	* 8000 N/A N/A N/A N/A C&O AFTER S	3A114200
	* SUB 8000 FROM 0000 DID NOT TURN DN CARRY	3A114210
	*	3A114220
3103 0 OAA8	DC A740 AD-0000 0000	3A114230 3A114240
	* FFFF FFFF N/A N/A N/A N/A AFTER LDD	3A114250
	* FFFF FFFF N/A N/A N/A N/A AFTER AD	3A114260
	* ACCUM NOT EQUAL FFFF	3A114270
	*	3A114280 3A114290
	•	JA117270

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*****		***********************	3A11430 3A1143:**
	ADDRESS	*	3A1143
	OF	*	341143
B-REG	ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A11434
3104 0		**************************************	
2104 0	VARO	DC A740 AD-0000 0000 * FFFF FFFF N/A N/A N/A A/A AFTER ADD	3A1143
		* FFFF FFFF N/A N/A N/A N/A AFTER RTE	3A11437
		* Q REG NOT EQUAL FFFF	3A11439
		*	3A11440
		•	3A1144
3105 0	BAAO	DC A740 AD-0000 0000	3A1144
		* FFFF FFFF N/A N/A N/A OFF AFTER LDD	341144
		* FFFF FFFF N/A N/A N/A OFF AFTER RTE	3A11444
		* OVERFLOW SET SHOULD NOT BE	341144
		*	3A1144
3106 0	0440	·	341144
3100 0	UMAD	DC A740 AD-0000 0000 * FFFF FFFF N/A N/A N/A OFF AFTER LDD	3A11440
		* FFFF FFFF N/A N/A N/A OFF AFTER RTE	3A1145
		* CARRY SET-SHOULD NOT BE	3A1145
		*	3A1145
		. •	3A1145
3107 0	OAD 7	DC A746 AD-FFFF FFFF	3A1145
		* 0000 0001 N/A N/A N/A N/A AFTER LDD	3A1145
		* 0000 0000 N/A N/A N/A N/A AFTER AD	3A1145
		* OVERFLOW SET- SHOULD NOT BE	3A1145
		*	3A1145
3100 0	0407	*	3A11459
3108 0	DAD	DC A746 AD-FFFF FFFF	3A1146
		* 0000 0001 N/A N/A N/A N/A AFTER LDD * 0000 0000 N/A N/A N/A N/A AFTER AD	3A1146
		* Q REG NOT EQUAL 0000	3A1146
		*	3A1146
		•	3A1146
3109 0	OAD7	DC A746 AD-FFFF FFFF	3A1146
		* 0000 0001 N/A N/A N/A DFF AFTER LUD	3A1146
		* 0000 0000 N/A N/A N/A C AFTER AD	3A1146
		* CARRY NOT SET- SHOULD BE	3A1146
		•	3A1147
			3A1147
310A 0	OAD7	DC A746 AD-FFFF FFFF	3A1147
		* 0000 0001 N/A N/A N/A OFF AFTER LDD	3A1147
		* 0000 0000 N/A N/A N/A C AFTER AD	3A11474
		* CARRY NOT SET-SHOULD BE	3A1147
		•	3A1147
310B 0	0803	DC A74C AD-FFFF FFFF	3A1147
0		* FFFF FFFF N/A N/A N/A AFTER LDD	3A1147
		* FFFF FFFE N/A N/A N/A N/A AFTER AD	3A1148
		* ACCUM NOT EQUAL FFFF	3A1148
		•	3A1148
		•	3A1148
310C 0	OBO3	DC A74C AD-FFFF FFFF	3A1148
		* FFFF FFFF N/A N/A N/A AFTER LDD	3A1148
		* FFFF FFFE N/A N/A N/A AFTER AD	3A1148
		* Q REG NOT EQUAL FFFE *	3A1148
			3A1146
310D 0	0803	DC A74C AD-FFFF FFFF	3A1149
2100 0	UBU 3	* FFFF FFFF N/A N/A N/A OFF AFTER LDD	3A1149
		* FFFF FFFE N/A N/A N/A C AFTER AD	3A1149
		* OVERFLOW ON-SHOULD NOT BE	3A1149
		*	3A1149
		•	3A1149
		•	3A1149
		•	3A1149

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	•	3A114980
**********		**3A114990
ADDRESS		3A115000
OF B-REG ROUTINE	# #_DEC 0.050 WD 1 WD 2 WD 2 CTATUS	3A115010
	* A-REG Q-REG XR-1	3A115020
310E 0 0803	DC A74C AD-FFFF FFFF	3A115040
	* FFFF FFFF N/A N/A N/A OFF AFTER LDD	3A115050
•	* FFFF FFFE N/A N/A N/A C AFTER AD	3A115060
	* CARRY NOT ON-SHOULD BE	3A115070
	•	3A115080 3A115090
310F 0 0B2D	DC B742 AD-FFFF FFFF	3A115100
	* FFFF 7FFF N/A N/A N/A N/A AFTER LDD	3A115110
	* FFFF 7FFE N/A N/A N/A AFTER AD	3A115120
	* ACCUM NOT EQUAL FFFF	3A115130
	•	3A115140 3A115150
3110 0 OB2D	DC B742 AD-FFFF FFFF	3A115160
	* FFFF 7FFF N/A N/A N/A N/A AFTER LDD	3A115170
	* FFFF 7FFE N/A N/A N/A AFTER AD	3A115180
	* Q REG NOT EQUAL 7FFE	3A115190
	•	3A115200 3A115210
3111 O OB2D	DC B742 AD-FFFF FFFF	3A115220
	* FFFF 7FFF N/A N/A N/A OFF AFTER LDD	3A115230
	* FFFF 7FFE N/A N/A N/A C AFTER AD	3A115240
	* OVERFLOW SET-SHOULD NOT BE	3A115250
	•	3A115260 3A115270
3112 O OB2D	DC B742 AD-FFFF FFFF	3A115280
	* FFFF 7FFF N/A N/A N/A OFF AFTER LDD	3A115290
	* FFFF 7FFE N/A N/A N/A C AFTER AD	3A115300
	* CARRY NOT SET-SHOULD BE	3A115310
	•	3A115320 3A115330
3113 0 0857	DC 8747 AD-0001 ODD LOC	3A115340
	* 0000 0001 N/A N/A N/A N/A AFTER LDD	3A115350
	* 0001 0002 N/A N/A N/A N/A AFTER AD	3A115360
	* ACCUM NOT EQUAL 0001	3A115370
	•	3A115380 3A115390
3114 0 0857	DC B747 AD-0001 ODD LOC	3A115400
	* 0000 0001 N/A N/A N/A N/A AFTER LDD	3A115410
	* 0001 0002 N/A N/A N/A N/A AFTER AD	3A115420
	* Q REG NOT EQUAL 0002	3A115430
	•	3A115440 3A115450
3115 0 0879	DC A780 SD-0000 0001	3A115460
	* 0000 0000 N/A N/A N/A N/A AFTER LDD	3A115470
	* FFFF FFFF N/A N/A N/A AFTER SD	3A115480
	* ACCUM NOT EQUAL FFFF *	3A115490
	•	3A115500 3A115510
3116 0 OB79	DC A780 SD-0000 0001	3A115520
	* 0000 0000 N/A N/A N/A N/A AFTER LDD	3A115530
	* FFFF FFFF N/A N/A N/A N/A AFTER SD	3A115540
	* Q REG NOT EQUAL FFFF *	3A115550 3A115560
	•	3A115570
3117 0 0B79	DC A780 SD-0000 0001	3A115580
	* 0000 0000 N/A N/A N/A OFF AFTER LDD	3A115590
	* FFFF FFFF N/A N/A N/A C AFTER SD * OVERFLOW ON—SHOULD NOT BE	3A115600
	* OACKLING OU-2400ID WOLDE	3A115610 3A115620
	•	3A115630
	•	3A115640
	•	3A115650

	*	3A115e
**************************************		***3A11567
OF	•	3A11569
B-REG ROUTINE		3A11570
3118 0 OB79		
3110 0 0019	DC A780 SD-0000 0001 * 0000 0000 N/A N/A N/A OFF AFTER LDD	3A11572 3A11573
	* FFFF FFFF N/A N/A N/A C AFTER SD	3A11574
	* CARRY NOT ON-SHOULD BE	3A11579
	•	3A1157
2110 0 0012	•	3A1157
3119 0 OBA3	DC A786 SD-FFFF FFFF * 0000 0000 N/A N/A N/A N/A AFTER LDD	3A1157
	* 0000 0000 N/A N/A N/A N/A AFTER LDD * 0000 0001 N/A N/A N/A N/A AFTER SD	3A11579 3A11580
	* ACCUM NOT EQUAL TO 0000	3A1158
	•	3A1158
	•	3A1158
311A 0 OBA3	DC A786 SD-FFFF FFFF	3A1158
	* 0000 0000 N/A N/A N/A N/A AFTER LDD * 0000 0001 N/A N/A N/A N/A AFTER SD	3A11589
	* 0000 0001 N/A N/A N/A N/A AFTER SD * Q REG NOT EQUAL 0001	3A1158
	* A MEG HOL EAGNE ODGI	3A1158 3A1158
	•	3A1158
3118 O OBB8	DC A78A SD-FFFF FFFF	3A1159
	* 0000 C000 N/A N/A N/A N/A AFTER LDD	3A1159
	* 0000 C001 N/A N/A N/A N/A AFTER SD	3A1159
	* ACCUM NOT EQUAL 0000	3A1159
	• • • • • • • • • • • • • • • • • • •	3A1159 3A1159
311C 0 OBB8	DC A78A SD-FFFF FFFF	3A1159
	# 0000 C000 N/A N/A N/A N/A AFTER LDD	3A1159
	* 0000 C001 N/A N/A N/A N/A AFTER SD	3A1159
	* Q REG NOT EQUAL COOL	3A1159
		3A1160
BIID O OBCC	DC A78E SD-FFFF ODD LOC	3A11601
7110 0 0000	* 0000 0000 N/A N/A N/A N/A AFTER LDD	3A1160 3A1160
	* 0000 0001 N/A N/A N/A N/A AFTER SD	3A1160
	* ACCUM NOT EQUAL 0000	3A1160
	•	3A1160
	*	3A1160
SILE O OBCC	DC A78E SD-FFFF DDD LOC * 0000 0000 N/A N/A N/A N/A AFTER LDD	3A1160
	* 0000 0000 N/A N/A N/A N/A AFTER LDD * 0000 0001 N/A N/A N/A N/A AFTER SD	3A1160 3A1161
	* Q REG NOT EQUAL COOL	3A1161
	*	3A1161
	•	3A1161
SIIF O OBEC	DC A7CO MULT-ZAAA	3A1161
	* 5555 N/A N/A N/A N/A AFTER LD	3A11619
	◆ 0E38 9C72 N/A N/A N/A N/A AFTER M ◆ ACCUM NOT EQUAL 0E38	3A11616
	* ACCOM NOT EQUAL DESS	3A1161
		3A11619
120 0 OBEC	DC A7CO MULT-2AAA	3A1162
	* 5555 N/A N/A N/A N/A AFTER LD	3A1162
	* 0E38 9C72 N/A N/A N/A N/A AFTER M	3A11622
	* Q REG NOT EQUAL 9C72	3A11623
	•	3A11624 3A11625
121 0 0001	DC A7C4 MULT-FFFF	3A11626
	* FFFF N/A N/A N/A N/A AFTER LD	3A11627
	* 0000 0001 N/A N/A N/A N/A AFTER M	3A11628
	* ACCUM NOT EQUAL 0000	3A11629
		3A11630
	•	3A11631
	•	3A11632
	·	3A11633

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		*	24114242
******	*********		3A116340
	ADDRESS	*	3A116360
	OF	*	3A116370
B-REG	ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	34116380
******	*********	*****************	*****3A116390
3122 0		DC A7C4 MULT-FFFF	3A116400
		* FFFF N/A N/A N/A N/A AFTER LD	3A116410
		* 0000 0001 N/A N/A N/A N/A AFTER M	3A116420
		* Q REG NOT EQUAL 0001	3A116430
		*	3A116440
3133 0	0515	*	3A116450
3123 0	00.12	DC A7C8 MULT-FFFF * 0000 N/A N/A N/A N/A AFTER ID	3A116460
		* 0000 N/A N/A N/A N/A AFTER LD * 0000 0000 N/A N/A N/A N/A AFTER M	3A116470
		* ACCUM NOT EQUAL 0000	3A116480
		*	3A116490 3A116500
		*	3A116510
3124 0	OC 15	DC A7C8 MULT-FFFF	3A116520
•		* 0000 N/A N/A N/A N/A AFTER LD	3A116530
		* 0000 0000 N/A N/A N/A N/A AFTER M	3A116540
		* Q REG NOT EQUAL 0000	3A116550
		*	3A116560
2126 0	0020	*	3A116570
3125 0	UC 28	DC A7CC MULT-0000 * FFFF N/A N/A N/A N/A N/A AFTER ID	3A116580
		* FFFF N/A N/A N/A N/A AFTER LD * 0000 0000 N/A N/A N/A N/A AFTER M	3A116590
		* ACCUM NOT EQUAL 0000	3A116600
		*	3A116610 3A116620
		*	3A116630
3126 0 (DC 28	DC A7CC MULT-0000	3A116640
		* FFFF N/A N/A N/A N/A AFTER LD	3A116650
		* 0000 0000 N/A N/A N/A N/A AFTER M	3A116660
		* Q REG NOT EQUAL 0000	3A116670
		•	3A116680
2127 0	nc.	*	3A116690
3127 0 (0643	DC A800 DVD-8000 * 4000 7FFF N/A N/A N/A N/A AFTER LDD	3A116700
		The state of the s	3A116710
		* 8000 7FFF N/A N/A N/A AFTER D * ACCUM NDT EQUAL 8000	3A116720
		*	3A116730 3A116740
		*	3A116750
3128 0 (DC43	DC A800 DVD-8000	3A116760
		* 4000 7FFF N/A N/A N/A N/A AFTER LDD	3A116770
		* 8000 7FFF N/A N/A N/A AFTER D	3A116780
		* Q REG NOT EQUAL 7FFF	3A116790
		*	3A116800
2120 0	0012	*	3A116810
3129 0 (0043	DC A800 DVD-8000	3A116820
		* 4000 7FFF N/A N/A N/A OFF AFTER LDD * 8000 7FFF N/A N/A N/A N/A AFTER D	3A116830
		* OVERFLON ON-SHOULD NOT BE	3A116840
		* OAEKLEON ON-ZHOOFD NOT DE	3A116850
		*	3A116860 3A116870
312A 0 0	DC43	DC A800 DVD-8000	3A116880
		* 4000 7FFF N/A N/A N/A OFF AFTER LDD	3A116890
		* 8000 7FFF N/A N/A N/A N/A AFTER D	3A116900
		* CARRY ON-SHOULD NOT BE	3A116910
		•	3A116920
2128 0 4	~ 71	*	3A116930
312B 0 (UC / I	DC A806 DVD-5555	3A116940
		* 1C71 BBE3 N/A N/A N/A AFTER LDD * 5555 2DAA N/A N/A N/A AFTER D	3A116950
		* 5555 2DAA N/A N/A N/A AFTER D * ACCUM NOT EQUAL 5555	3A116960
		* ACCOUNT EANY 3333	3A116970
		•	3A116980 3A116990
		•	3A117000
		•	3A117010

	•	
********	************************************	3A117020
ADDRESS	*	3A117040
OF .	•	3A117050
B-REG ROUTINE ***********	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A117060
3120 0 0071		
3120 0 00.1	DC	3A117080
	* 5555 2DAA N/A N/A N/A AFTER D	3A117090 3A117100
	* Q REG NOT EQUAL 2DAA	3A117110
	•	3A117120
3120 A AC71	* DC 100/	3A117130
312D 0 0C71	DC A806 DVD-5555 * 1C71 B3E3 N/A N/A N/A DFF AFTER LDD	3A117140
	* 5555 2DAA N/A N/A N/A N/A AFTER D	3A117150 3A117160
	* OVERFLOW ON-SHOULD NOT BE	3A117170
	•	3A117180
2125 0 0071	*	3A117190
312E 0 0C71	DC 4806 DVD-5555 * 1C71 BBE3 N/A N/A N/A DEF AFTER IND	3A117200
	* 1C71 BBE3 N/A N/A N/A OFF AFTER LDD * 5555 2DAA N/A N/A N/A AFTER D	3A117210
	* CARRY ON-SHOULD NOT BE	3A117220 3A117230
	*	3A117240
	• '	3A117250
312F 0 0C9A	DC A80C DVD-0000	3A117260
	* 0000 0001 N/A N/A N/A OFF AFTER LDD * N/A N/A N/A N/A N/A O AFTER D	3A117270
	* N/A N/A N/A N/A N/A O AFTER D * DVERFLOW NOT ON- SHOULD BE OR Q-REG NOT 1	3A117280
	* ALEKLEON MOL ON- SHOOFD BE DK G-KEG MOL I	3A117290 3A117300
	•	3A117310
3130 0 OCA9	DC A80E DVD-0001	3A117320
	* 4000 0000 N/A N/A N/A OFF AFTER LDD	3A117330
	* N/A N/A N/A N/A N/A D AFTER D	3A117340
	* OVERFLOW NOT ON-SHOULD BE	3A117350
	•	3A117360 3A117370
3131 0 OCB4	DC 8800 DVD-4000	3A117380
	* A000 0000 N/A N/A N/A OFF AFTER LDD	3A117390
	* N/A N/A N/A N/A O AFTER D	3A117400
	* OVERFLOW NOT ON-SHOULD BE	3A117410
	*	3A117420
3132 0 OCBF	DC 8802 DVD-8000	3A117430 3A117440
	* COOO OOOO N/A N/A N/A DFF AFTER LDD	3A117450
	* N/A N/A N/A N/A D AFTER D	3A117460
	* OVERFLOW OFFSHOULD BE ON	3A117470
	*	34117480
3133 O OCCA		3A117490
3133 0 0002	DC B804 DVD-0001 * 0000 FFFF N/A N/A N/A DFF AFTER LDD	3A117500 3A117510
	* N/A N/A N/A N/A D AFTER D	3A117520
	* OVERFLOW OFFSHOULD BE ON	3A117530
	*	3A117540
3134 0 0005	*	3A117550
3134 0 OCD5	DC 8806 DVD-0001 * FFFF 7FFF N/A N/A N/A OFF AFTER LDD	3A117560
	* FFFF 7FFF N/A N/A N/A OFF AFTER LDD * N/A N/A N/A N/A N/A O AFTER D	3A117570 3A117580
	* OVERFLOW OFFSHOULD BE ON	3A117590
	*	3A117600
	•	3A117610
3135 0 0 D56	DC AB40 MDX 1	3A117620
	* N/A N/A 0000 N/A N/A N/A AFTER LDX	3A117630
	* N/A N/A FFFF N/A N/A N/A AFTER MDX 1	3A117640
	* INDEX REG 1 NOT EQUAL FFFF WHEN MODIFIED * BY MINUS 1	3A117650 3A117660
	*	3A117670
	•	3A117680

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14A

	A ADD ON TO MEMORY FATIER	
*****	* ADD &1 TO MEMORY FAILED	3A117700
	*	
ADDRESS OF	*	3A117720
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A117730
************	**************************************	3A117740
	\$	3A117760
	*	3A117770
3137 0 OD79	DC A844 MDX 2 LONG FORM	3A117780
	* N/A N/A N/A FFFE N/A N/A AFTER LDX	3A117790
	* N/A N/A N/A FFFF N/A N/A AFTER MDX 2	3A117800
	* INDEX REG 2 NOT EQUAL TO FFFF AFTER MDX &1	3A117810
	* TO INDEX REG 2	3A117820
	*	3A117830
3138 0 0D88		3A117840
3138 0 0066	DC A846 MDX 3 * N/A N/A N/A N/A FFFF N/A AFTER LDX	3A117850 3A117860
	* N/A N/A N/A N/A 0000 N/A AFTER HDX 2	3A117870
*	* MDX DID NOT CAUSE A SKIP WHEN INDEX REG 3	3A117880
	* WENT TO 0000	3A117890
	•	3A117900
	•	3A117910
3139 0 OD92	DC A848 MDX 1	3A117920
	* N/A N/A FFFF N/A N/A N/A AFTER LDX	3A117930
	* N/A N/A 0003 N/A N/A N/A AFTER MDX 1	3A117940
	* MDX DID NOT CAUSE A SKIP WHEN THE SIGN * CHANGED ON INDEX REG 1	3A117950
	+ CHANGED ON THREE KEG I	3A117960 3A117970
	•	3A117980
313A 0 0D9C	DC A849 MDX 1 INDIRECT	3A117990
	* N/A N/A FFFE N/A N/A N/A AFTER LDX	3A118000
	* N/A N/A FFFF N/A N/A N/A AFTER LDX 11	
	* INDIRECT MDX OF INDEX REG 1 BY &1 FAILED	3A118020
	•	3A118030
2128 0 0000	*	3A118040
3138 0 ODCF	DC A880 SLCA-XR 1	3A118050
	* 0000 N/A 0010 N/A N/A N/A AFTER LDX * 0000 N/A 0000 N/A N/A N/A AFTER SLCA	3A118060
•	* ACCUM NOT EQUAL ODGO	3A118070 3A118080
	*	3A118090
	•	3A118100
313C 0 ODCF	DC A880 SLCA-XR 1	3A118110
	* 0000 N/A 0010 N/A N/A N/A AFTER LDX	3A118120
	* 0000 N/A 0000 N/A N/A N/A AFTER SLAC	3A118130
	* INDEX REG 1 NOT EQUAL 0000	3A118140
	* *	3A118150
313D 0 0DF6		3A118160
J.JU U UUFU	DC A884 SLCA-XR 1 * 0001 N/A FFDO N/A N/A N/A AFTER LDX	3A118170 3A118180
	* 8000 N/A FFC1 N/A N/A N/A AFTER ASCL	3A118190
	* ACCUM NOT EQUAL 8000	3A118200
	•	3A118210
	•	3A118220
313E 0 0DF6	DC A884 SLCA-XR 1	3A118230
	* 0001 N/A FFDO N/A N/A N/A AFTER LDX	3A118240
	* 8000 N/A FFC1 N/A N/A AFTER LDX	3A118250
	* INDEX REG 1 NOT EQUAL FFC1	3A118260
	•	3A118270
313F 0 0E1E	DC A888 SLCA-XR 1	3A118280 3A118290
	* 8000 N/A 0010 N/A N/A AFTER LDX	3A118300
	* 8000 N/A 0010 N/A N/A N/A AFTER SLCA	3A118310
	* ACCUM NOT EQUAL 8000	3A118320
	•	3A118330
3140 0 0535	*	3A118340
3140 0 OE1E	DC A888 SLCA-XR 1	3A118350
	* 8000 N/A 0010 N/A N/A N/A AFTER LDX * 8000 N/A 0010 N/A N/A N/A AFTER SICA	3A118360
	* 8000 N/A 0010 N/A N/A N/A AFTER SLCA	3A118370

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	ADDRESS	****************	3A11839 3A11840
	OF	•	3A11841
B-REG	ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	2411042
******	********	************************************	*3A11843
		•	3A11844
3141 0	0659	* DC A88C SLC-XR 1	3A11845
7141 0	0237		3A11846
		* 0000 0000 0020 N/A N/A N/A AFTER LDX * 0000 0000 0000 N/A N/A N/A AFTER SLC	3A11847 3A11848
		* ACCUM NOT EQUAL 0000	3A11849
		*	3A11850
		•	3A11851
3142 0	0E59	DC A88C SLC-XR 1	3A11852
		* 0000 0000 0020 N/A N/A N/A AFTER LDX	3A11853
		* 0000 00L0 0000 N/A N/A N/A AFTER SLC	3A11854
		* D REG NOT EQUAL 0000	3 A 11855
			3A11856
1112 0	0550	•	3A11857
1143 0	0524	DC A88C SLC-XR 1	3A11858
		* 0000 0000 0020 N/A N/A AFTER LDX	3A11859
		* 0000 0000 0000 N/A N/A N/A AFTER SLC	3A11860
		* INDEX REG 1 NOT EQUAL 0000	3A11861
			3A11862 3A11863
144 0	0F78	DC B882 SLC-XR 1	3A11864
		* 0000 0002 FFDF N/A N/A N/A AFTER LDX	3A11865
		* 8000 0000 FFC1 N/A N/A N/A AFTER SLC	3A11866
		* ACCUM NOT EQUAL 8000	3A11867
		* · · · · · · · · · · · · · · · · · · ·	3A11868
			3A11869
145 0	0E78	DC BB82 SLC-XR 1	3A11870
		* 0000 0002 FFDF N/A N/A N/A AFTER LDX	3A11871
		* 8000 0000 FFC1 N/A N/A N/A AFTER SLC	3A11872
		* Q REG NOT EQUAL 0000	3A11873
			3A11874
146 0	0579		3A11875
140 0	0510	DC B882 SLC-XR 1 * 0000 0002 FFDF N/A N/A N/A AFTER LDX	3A11876
		* 0000 0002 FFDF N/A N/A N/A AFTER LDX * 8000 0000 FFC1 N/A N/A N/A AFTER SLC	3A11877
		* INDEX REG 1 NOT EQUAL FFC1	3A11878 3A11879
		*	3A11880
			3A11881
147 0	0E9A	DC B884 SLC-XR 1	3A11882
		* 0000 0002 001F N/A N/A N/A AFTER LDD&LDX	
		* 8000 0000 0001 N/A N/A C AFTER SLC	3A11884
			3A11885
		* ZERO DID NOT TURN ON CARRY	3A11886
		•	3A11887
		•	3A11888
148 0	OE9A	DC 8884 SLC-XR 1	3A11889
		* 0000 0002 001F N/A N/A N/A AFTER LDD&LDX	
		* 8000 0000 0001 N/A N/A C AFTER SLC	3A11891
		* ACCUM WAS NOT EQUAL TO 8000	3A11892
		•	3A11893 3A11894
149 0	0F9A	DC B884 SLC-XR 1	3A11895
. ¬, U	V	* 0000 0002 001F N/A N/A N/A AFTER LDD&LDX	
		* 8000 0002 0001 N/A N/A C AFTER SLC	3A11897
		* A SLC TERMINATED BY A ONE IN ACCUM BIT	3A11898
		* ZERO DID NOT LEAVE XR 1 EQUAL 0001	3A11899
		•	3A11900
		•	3A11901
14A O	OEB A	DC B885 SLC-IX 1	3A11902
		* 0000 0002 001C N/A N/A N/A AFTER LDD&LDX	
		* 2000 0000 0000 N/A N/A OFF AFTER SLC	3A11904
		* A SLC TERMINATED BY XR 1 GOING TO ZERO LEFT	3A11905

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	THE CARRY FF SET	3A119060
	*************************	3A119070
ADDRESS *		3A119080
0F •		3A119090
B-KEG ROUTINE +	A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A119100
***************	*******************************	3A119110
		3A119120
•		3A119130
314B 0 0ED6	DC BBAO CMP A GREATER M	3A119140
•	4000 N/A N/A N/A N/A	3A119150
*		3A119160
•		3A11917C
314C 0 0ED6	DC BBAO CMP A GREATER M	3A119180 3A119190
	4000 N/A N/A N/A N/A AFTER LD	3A119200
	4000 N/A N/A N/A N/A AFTER CMP	3A119210
*	ACC DISTROYED AFTER CMP	3A119220
*		3A119230
•		3A119240
314D 0 0EF1	DC B8A1 CMP A LESS M	3A119250
*	0000 N/A N/A N/A N/A	3A119260
	ACC LESS THAN M FAILS	3A119270
•		3A119280
•		3A119290
314E 0 0EFB	DC BBA2 CMP A LESS M	3A119300
	0000 N/A N/A N/A N/A	3A119310
*		3A119320
•		3A119330
314F 0 0F05	DC BBA3 CMP A LESS M	3A119340
3140 0 0005	0000 N/A N/A N/A N/A N/A	3A119350
•		3A119360 3A119370
•	ACC EEGS THAN IN TRIES	3A119380
•		3A119390
3150 0 OFOF	DC BBA4 CMP A LESS M	3A119400
•	8000 N/A N/A N/A N/A	3A119410
		3A119420
•		3A119430
•		3A119440
3151 0 OF19	DC B8A5 CMP A EQ M	3A119450
•	1000 N/A N/A N/A N/A	3A119460
•	ACC EQ M FAILED	3A119470
•		3A119480
3153 0 0534		3A119490
3152 0 OF24	DC B8CO DCM AQ GTR M.M&1	3A119500
•	8000 0001 N/A N/A N/A N/A DCM AQ GREATER THAN M, M&1 FAILED	3A119510
•		3A119520 3A119530
		3A119540
3153 0 0F24	DC BBCO DCM AQ GTR M. ME1	3A119550
	8000 0001 N/A N/A N/A N/A	3A119560
•		3A119570
*		3A119580
•		3A119590
3154 0 OF24	DC B8CO DCM AQ GTR M.ME1	3A119600
	8000 0001 N/A N/A N/A N/A	3A119610
*	The state of the s	3A119620
•		3A119630
3155 0 0F3E		3A119640
	DC B8C1 DCM AQ LESS M,ME1	3A119650
•	0000 8000 N/A N/A N/A N/A	3A119660
•	DCM FAILED WHEN A,Q LESS THAN M, M&1	3A119670
•		3A119680
3156 0 0F46	DC B8C2 DCM AQ EQ M.ME1	3A119690 3A119700
	0000 8000 N/A N/A N/A N/A	3A119710
•	DCM FAILED WHEN A.Q EQ M. MEI	3A119720
•		3A119730

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	•	3A119740
***********	****************	*3A119750
ADDRESS OF	•	3A119760
B-KEG ROUTINE	i a aca a cas	3A119770
*********		3A119780
3157 0 087F	DC A660 LDX 1 -1	3A119790
	* N/A N/A 0000 0000 0000 N/A AFTER LDX2S	3A119810
•	* N/A N/A FFFF 0000 0000 N/A AFTER LDX 1	3A119820
	* INDEX 2 CHANGED	3A119830
	•	3A119840
3158 0 087F	*	3A119850
3136 0 0877	DC A660 LDX 1 -1 * N/A N/A 0000 0000 0000 N/A AFTER LDXAS	3A119860
	* N/A N/A FFFF 0000 0000 N/A AFTER LDX 1	3A119870 3A119880
	* INDEX 3 CHANGED	3A119890
	•	3A119900
	•	3A119910
3159 0 0897	DC A662 LDX 2 -1	3A119920
	* N/A N/A 0000 0000 0000 N/A AFTER LDX2S	3A119930
	* N/A N/A 0000 FFFF 0000 N/A AFTER LDX 2 * INDEX 1 CHANGED	3A119940
	+ INDEX I CHANGED	3A119950
	•	3A119960 3A119970
315A 0 0897	DC A662 LDX 2 -1	3A119980
	* N/A N/A 0000 0000 0000 N/A AFTER LDX3S	3A119990
	* N/A N/A 0000 FFFF 0000 N/A AFTER LDX 2	3A120000
	* INDEX 3 CHANGED	3A120010
	•	3A120020
3158 0 08AF		3A120030
3136 U UBAF	DC A664 LDX 3 -1 * N/A N/A 0000 0000 0000 N/A AFTER LDX@S	3A120040 3A120050
	* N/A N/A 0000 0000 FFFF N/A AFTER LDX 3	3A120050
	* INDEX 1 CHANGED	3A120000
	•	3A120080
	•	3A120090
315C 0 08AF	DC A664 LDX 3 -1	3A120100
	* N/A N/A 0000 0000 0000 N/A AFTER LDX35	3A120110
	* N/A N/A 0000 0000 FFFF N/A AFTER LDX 3 * INDEX 2 CHANGED	3A120120
	* INDEX 2 CHANGED	3A120130 3A120140
	•	3A120150
315D 0 09DC	DC A6DO INDEXED INST F#3	3A120160
	* INITIALLY XR 1 HAS CORE LOCATION OF	3A120170
	* SYMBOLIC LABEL NGC1	3A120180
	* AFTER THE TEST THE ACC SHOULD HAVE	3A120190
	* CORE LOCATION OF SYMBOLIC LABEL NGCO * SHORT FORM INDEXED INST EATLED TYPE	3A120200
	* SHORT FORM INDEXED INST FAILED \$X#10	3A120210 3A120220
	•	3A120230
315E 0 09ER	DC A6D2 INDEXED INST F#0	3A) 20240
	* INITIALLY XR 2 HAS CORE LOCATION OF	3A120250
	* SYMBOLIC LABEL NGC1	3A120260
	* AFTER THE TEST THE ACC SHOULD HAVE	3A120270
	* CORE LOCATION OF SYMBOLIC LABEL N6C2 * SHORT FORM INDEXED INST FAILED %X#20	3A120280
	* SHOW! FORM INDEXED INS! FAILED \$A\$Z	3A120290 3A120300
	•	3A120310
315F 0 09F4	DC A6D3 INDEXED INST F#0	3A120320
	* INITIALLY XR 3 HAS CORE LOCATION OF	3A120330
	* SYMBOLIC LABEL NGC1	3A120340
	* AFTER THE TEST THE ACC SHOULD HAVE	3A120350
	* CORE LOCATION OF SYMBOLIC LABEL N6C1 * SHORT FORM INDEXED INST. FAILED \$X#3□	3A120360
	* JOOKI FORM INDEVEN THEST - LATER - TALES - T	3A120370 3A120380
	•	3A120390
	•	3A120400
	•	3A120410

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3A121100

CPU FUNCTION TEST

		120420
ADDRE		120450
OF.	-	120450
B-REG ROUTI		120460
*********		120470
*********	***************************************	1120480
3160 0 ODCF		120490
	* 0000 FFFF 000A N/A N/A C AFTER LDD&LDS 3	
	_	\120510 \120520
		120530
		120540
3161 0 ODF6		120550
	# 0001 0010 FFDO N/A N/A OFF AFTER LDD&LDX 3	1120560
	* 8000 0010 FF01 N/A N/A C AFTER SLCA 3/	120570
	The second secon	A120580
		120590
21/2 0 0520		A120600
3162 0 0E3B		N120610 N120620
		120630
		A120640
	-	120650
	* 3	A120660
3163 0 0A00	DC A6D5 INDEXED SLA 3	120670
	* 0001 N/A 0002 N/A N/A N/A AFTER LD&LDX 3	A120680
	****	120690
		A120700
		A120710
2144 0 0400	_	A120720 A120730
3164 0 0AOC	• • • • • • • • • • • • • • • • • • • •	A120740
		120750
	= = = =	A120760
		A120770
	*	A120780
3165 O OA18		A120790
		A120800
		A120810
		A120820 A120830
		A120840
3166 0 0A29		A120850
		A120860
		A120870
	* INDIRECT, INDEXED BSC FAILED 3	A120880
		A120890
		A120900
3167 0 0810		A120910
		A120920
		A120930 A120940
		A120950
		A120960
3168 0 0D9C		A120970
	* INITIALLY ACC HAS CORE LOCATION OF 3	A120980
		A120990
		A121000
		A121010
3169 0 0809	-	A121020 A121030
2407 0 0007		A121040
		A121050
		A121060
		A121070
	. • 3	A121080
		A121090

*************	************************************	*3A121110
ADDRESS	*	3A121120
OF	◆ A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A121130
B-REG ROUTINE	* A-REG Q-REG XR-1 XR-2 XR-3 STATUS	3A121140
	DC B807 DVD OVFLO * 6100 0000 N/A N/A N/A OFF AFTER LDD * N/A N/A N/A N/A N/A O AFTER D	3A12115U
316A 0 0D04	# AIOO OOOO N/A N/A N/A DEF AFTER LDD	34121100
	* N/A N/A N/A N/A N/A O AFTER D	3A121180
	₹ 11CF1 () Mill 11Mi	3812117U
	•	3A121200
	•	3A121210
3168 0 ODOF	DC B808 DVD DVFLO	3A121220
	* DC B808 DVD OVFLO * 8000 0000 N/A N/A N/A OFF AFTER LDD * N/A N/A N/A N/A O AFTER D	3A121250
	* OVFLO NOT ON	3A121250
	•	3A121260
	* DC B809 DVD NO DVFLO * FFFF FFFF N/A N/A N/A OFF AFTER LDD * N/A N/A N/A N/A OFF AFTER D	3A121270
316C 0 0D1A	DC B809 DVD NO OVFLO	3A121280
	* FFFF FFFF N/A N/A N/A OFF AFTER LDD	3A121290
	* N/A N/A N/A N/A N/A OFF AFTER D	3A121300
	* OVFLD ON, SHOULD BE OFF *	3A121310 3A121320
	•	34121320
316D 0 0D26	DC B810 MPY-DIV ZERO REM	3A121340
	* DC BB10 MPY-DIV ZERO REM * ACC WRONG AFTER MPY-DIV TEST	3A121350
	*	3A121360
	*	3A121370
316E 0 0D26	DC B810 MPY-DIV ZERO REM * Q REG WRONG AFTER MPY-DIV TEST	3A121380
	* Q REG WRONG AFTER MPY-DIV TEST *	3A121390
		34121400
316F 0 0D64	DC A842 MDY CK ACC	3A121420
	* INITIALLY ACC HAS CORE LOCATION OF	3A121430
	* SYMBOLIC LABEL N844	3A121440
	* DC A842 MDY CK ACC * INITIALLY ACC HAS CORE LOCATION OF * SYMBOLIC LABEL N844 * ACC DISTROYED AFTER ADD TO MEMORY	3A121450
	•	3A121460
3170 0 05FC	* DC A50A BSC CK ACC	3A121470
SITO O OSFC	* BOOL N/A N/A N/A N/A AFTER LD	34121490
	* BOOL N/A N/A N/A N/A AFTER BSC	3A121500
	* 8001 N/A N/A N/A N/A N/A AFTER LD * 8001 N/A N/A N/A N/A N/A AFTER BSC * ACC DISTROYED AFTER BSC CONDITIONS MET	3A121510
	•	J-1
	★	3A121550
3171 0 ODB2	DC A84A MDX MEM CK SKIP	3A121540
	DC AB4A MDX MEM CK SKIP * MEMORY LOC HAS ZERO * MDX FAILED TO SKIP	3A121550 3A121560
	+ MAY LAIFED IN 2KIL	3A12157
	_	2412150
3172 O ODBC	DC ARSA MDX MEM CK NO SKP	3A12159
	* MEMORY LOC IS NON ZERO	341210U
	* MDX SKIPED, SHOULD NOT HAVE	3A12161
		3A12162
	•	3A121630
3173 0 0E48	* DC ABBA SW 15 NO INDEX	3A121644 3A121650
3173 0 0546	+ 0000 FFFF 0010 0010 0010 NAFTER LDX2S	3A12166
	* 7FFF N/A N/A N/A N/A NAFTER SLC	3A121670
	*ACCUM NOT EQ TO 7FFF	3A121680
	•	3A121690
	•	3A12170
	* THOUGHT CONTROL	3A121710
3174 0 OF69	DC FOOO IMPROPER CONTROL	3A121720
	* OPERATION SPECIFIED, * BIT SW 14 ON WITHOUT	3A121730 3A121740
		J-4-27.7
		34121750
	* BIT SW 8 OR 12 ON. * CORRECT SWS AND PUSH	3A121750 3A121760

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			•		
	*				3A121780
	****	******	*******	*********	3A121790
	*****	******	*******	******	3A121800
3175		ORG	300		3A121810
012C 0 03A1		DC	/03A1	PID	3A121820
	*				3A121830
	*****	******	*******	*********	3A121840
	*				3A121850
	*		TEST	MDX OPERATION	3A121860
	*				3A121870
	****	******	*******	******	3A121880
*************	****			********	3A121890
CORE DATA OR	*1 A=	OPER-			
ADDR INSTRUCTION			ODEDANDS (REMARKS IDESEO# AT RIGHT	3A121900
ADDK INSTRUCTION	-DEL	AIIUN F!	UPERANUS (*****************	3A121910
0130 0 3000	¥000	00	**************************************		3A121920
012D 0 3000	X000	DC	/3000	SET SWITCHES TO RUN	3A121930
012E 0 7001	080A	MDX	G080		3A121940
012F 0 3004		DC	/3004	ERR ID & ERR WAIT	3A121950
1	*			MDX BY 1 FAILED	3A121960
0130 0 7002	G080	MDX	G081		3A121970
0131 0 3005		DÇ	/3005	ERR ID & ERR WAIT	3A121980
and the state of t	*			MDX BY 2 FAILED	3A121990
0132 0 3006		DC	/3006	ERR ID & ERR WAIT	3A122000
	*			MDX BY 2 FAILED	3A122010
0133 0 7004	G081	MDX	G082		3A122020
0134 0 3007		DC	/3007	ERR ID & ERR WAIT	3A122030
	*	-	, 500 .	MDX BY 4 FAILED	3A122040
0135 0 3008	-	DC	/2000	ERR ID & ERR WAIT	
0133 0 3008		, DC	/3008		3A122050
013/ 0 3000	•			MDX BY 4 FAILED	3A122060
0136 0 3009		DC	/3009	ERR ID & ERR WAIT	3A122070
	*			MDX BY 4 FAILED	3A122080
0137 0 300A		DC .	/300A	ERR ID & ERR WAIT	3A122090
	*			MDX BY 4 FAILED	3A122100
0138 0 7002	G082	MDX	G084		3A1/22110
0139 0 300B		DC .	/300B	ERR ID & ERR WAIT	3A122120
erina er Erina erina er	*			MDX BY 2 FAILED	34122130
013A 0 7004	G083	MDX	AOCO	EXIT TO NEXT ROUTINE	3A122140
013B 0 70FE	G084	_	G083	EXIT TO NEXT ROUTINE	3A122150
013C 0 300C		DC	/300C	ERR ID & ERR WAIT	
0150 0 5000	*	00	73000		3A122160
0130 0 3000	•	00	/2000	MDX BY -2 FAILED	3A122170
013D 0 300D	_	DC	/300D	ERR ID & ERR WAIT	3A122180
	*			MDX BY -2 FAILED	3A122190
013E 0 300E		DC .	/300E	ERR ID & ERR WAIT	3A122200
	*			MDX BY -2 FAILED	3A122210
	*				3A122220
	*		TEST	OF BSC SKIP WHEN IT	3A122230
	*		SHOUL	LD NOT	3A122240
	*				3A122250
	****	******	******	******	3A122260
013F 0 2003	AOCO	LDS	3	SET C AND OF ON	3A122270
0140 0 4802		BSC	ć	SK IF CARRY IS OFF	3A122280
0141 0 7002	*	MDX	GOC1	5K 17 GARRY 13 GFT	
0142 0 300F		DC		EOD ID C EDD HATT	3A122290
0142 0 3001	*	DC	/300F	ERR ID & ERR WAIT	3A122300
01/3 0 0000			_	BSC-CARRY FAILED	3A122310
0143 0 0000	N100	DC	0		3A122320
0144 0 4801	GOC 1	BSC	0		3A122330
0145 0 7001		MDX	G0C 2		3A122340
0146 0 3010		DC	/3010	ERR ID & ERR WAIT	3A122350
	*			BSC-OVERFLOW FAILED	3A122360
0147 0 4801	GOC 2	BSC	0 .	CK IF OF WAS RESET	3A122370
0148 0 3011		DC	/3011	ERR ID & ERR WAIT	3A122380
	*			BSC-DVFLW SKPD-SHOULD	3A122390
	*	S. S		*NOT HAVE	3A122400
0149 0 2000		LDS	0	RESET CARRY TO OFF	3A122410
014A 0 4802		BSC	Č	SK IF CARRY IS OFF	3A122420
014B 0 3012		DC	/3012	ERR ID & ERR WAIT	
JOIL		00	, 3012		3A122430
	*			BSC-C DID NOT SKIP	3A122440
	•				3A122450

			*		ALL	ZEROS	3A12247
			****	******	*******	*******	3A12248
****	****	*******	*****			**********	3A12249
ORE	DA	TA OR	*LA-	OPER-	·*		3A12251
DDR	IN	STRUCTION	*BEL	ATION F	T UPERANDS	& REMARKS ID&SEQ# AT RIGHT	3412252
****	****	******	*****	******	********	********	3A12253
	O COF		A100	LD	N100	LD /0000	3A12254
	0 482	-		BSC	2	SK IF ZERO	3A12255
1145	0 301	5	*	DC	/3013	ERR ID & ERR WAIT	3A12256
1145	O COF	.2	•		N100	LD ACC TO O FAILED	3A12257
_	0 482	-		LD BSC -	N100 Z	ACC#0+RELOAD TO O SK IF ZERO	3A12258
	0 301	-		DC	/3014	ERR ID & ERR WAIT	3A12259 3A12260
			*			LD ACC TO O FAILED	3A12261
	0 480		* 1	BSC	E	SK IF EVEN	3A12262
0153	0.301	5		DC	/3015	ERR ID & ERR WAIT	3A12263
			*			BSC ON EVEN FAILED	3A12264
			*				3A12265
			*		CON	TAIN ALL DNES	3A12266
			****	*****		******	3A12267
1154	0 CO4		A140	LD	N140	ACC.#0.RELDAD TO ONES	3A12268
	0 481		~. 70	BSC	-	SK IF MINUS	3A12269
	0 301			DC	/3016	ERR ID & ERR WAIT	3A12270 3A12271
	.		* .		.	LOAD ACC. FAILED OR	3A12272
			*			*BSC ON NEG. FAILED	3A12273
	0 480	-		BSC	3		3A12274
	0 700	-		MDX	G140		3A12275
1159	0 301	7	_	DC	/3017	ERR ID & ERR WAIT	3412276
1154	0 480		£	B.C.C	-	BSC ON & SKPD-	3A12277
	0 700		G140	BSC MDX	E	*SHOULD NOT HAVE	3A12278
	0 301	_		DC	G141 /3018	ERR ID & ERR WAIT	3A12279
		•			73010	BSC ON E SKPD-	3A12280 3A12281
15D	0 180	1	6141	SRA	1	*SHOULD NOT HAVE	3A12282
)15E	0 480	4		BSC	Ē		3A12263
)15F	0 700	1		MDX	6142		3A12284
160	0 301	9		DC	/3019	ERR ID & ERR WAIT	3A12285
		•	*			ACC NOT # 7FFF	3A12286
	0 180		G142		1		3A12287
	0 480 0 700			BSC MDX	E G143		3A12288
	0 301	_		DC	/301A	ERR ID & ERR WAIT	3A12289 3A12290
			*		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ACC NOT # 3FFF	3A12291
165	0 180	1	G143	SRA	1		3A12292
166	0 480	4		BSC	Ě		3A12293
	0 700			MDX	6144		3A12294
168	0 301	В		DC	/301B	ERR ID & ERR WAIT	3A12295
		_	*			ACC NOT # 1FFF	3A12296
	0 180		6144	SRA	1		3A12297
	0-480			BSC	E	•	3A12298
	0 700 0:000			MOX	G145	EDD ID C EDD WATE	3A12299
100	J. JUU	•		DC	/301C	ERR ID & ERR WAIT ACC NOT # OFFF	3A12300
16D	0 180	1	6145	SRA	1	AUG HUI W VIFF	3A12301 3A12302
	0 480			BSC	Ê		3A12302
	0 700			MDX	G146		3A12304
170.	0 301	D		DC	/3010	ERR ID & ERR WAIT	3A12305
	4.1		*			ACC NOT # 07FF	3A12306
	0 180		G146	SRA	1		3A12307
	0 480			BSC	E		3A12308
	0 700			MDX	G147	500 to 6 500 mm.	3A12309
1.74	0 301	E	*	DC	/301E	ERR ID & ERR WAIT	3A12310
175	0 180	1	* G147	SRA	•	ACC NOT # 03FF	3A12311
	0 180 0 480		9141	BSC	1 E		3A12312 3A12313

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0177 0			MDX	G148		3A123140
0178 0	301F	_	DC	/301F	ERR ID & ERR WAIT	3A123150
		*	_	•	ACC NOT # 01FF	3A123160
0179 0		G148	SRA	1		32123170
017A 0			BSC	E		3A123180
0178 0			MDX	G149		3A123190
017C 0	3020	_	DC	/3020	ERR ID & ERR WAIT	3A123200
0170 0		*			ACC NOT # OOFF	3A123210
0170 0		G149	SRA	1		3A123220
017E 0			BSC	E		3A123230
017F 0 0180 0			MDX	G14A	500 10 C 500 WATE	3A123240
0180 0	3021		DC	/3021	ERR ID & ERR WAIT	3A123250
0181 0	1801	G14A	SRA	1	ACC NOT # 007F	3A123260 3A123270
0182 0		01 TA	BSC	Ė		3A123280
0183 0			MDX	G14B		3A123290
0184 0			DC	/3022	ERR ID & ERR WAIT	3A123300
0.0.0	JULE	*		, 3022	ACC NOT # 003F	3A123310
0185 0	1801	G14B	SRA	1	200 1101 # 0051	3A123320
0186 0			BSC	Ē		3A123330
0187 0	7001		MDX	G14C		3A123340
0188 0	3023		DC	/3023	ERR ID & ERR WAIT	3A123350
		*			ACC NOT # 001F	3A123360
0189 0	1801	G14C	SRA	1		3A123370
018A 0	4804		BSC	E		3A123380
018B O	7001		MDX	G14D		3A123390
018C 0	3024		DC	/3024	ERR ID & ERR WAIT	3A123400
		*			ACC NOT # 000F	3A123410
018D 0	1801	614D	SRA	1		3A123420
018E 0	4804		BSC	E		3A123430
018F 0			MDX	G14E		3A123440
0190 0	3025		DC	/3025	ERR ID & ERR WAIT	3A123450
		*			ACC NOT/ # 0007	3A123460
0191 0		G14E	SRA	1	!	3A123470
0192 0			BSC	E .	1	3A123480
0193 0			MDX	G14F	· · · · · · · · · · · · · · · · · ·	3A123490
0194 0	3026		DC	/3026	ERR ID & ERR WAIT	3A123500
0195 0	1001	C145	CD 4		ACC NOT # 0003	3A123510
0196 0		614F	SRA BSC	1		3A123520
0197 0			MDX	E G150		3A123530
0198 0			DC	/3027	ERR ID & ERR WAIT	3A123540 3A123550
01/0	3021		DC	73021	ACC NOT # 0001	3A123560
0199 0	1801	G150	SRA	1	ACC NOT # 0001	3A123570
019A 0	-	0.00	BSC	Ė		3A123580
0198 0			DC	/3028	ERR ID & ERR WAIT	3A123590
		*			ACC NOT # 0000	3A123600
019C 0	4820		BSC	2		3A123610
019D 0	3029		DC	/3029	ERR ID & ERR WAIT	3A123620
		*			ACC NOT # 0000	3A123630
019E 0	7001		MDX	A180	EXIT TO NEXT ROUTINE	3A123640
019F 0	FFFF	N140	DC	/FFFF		3A123650
		*		****		3A123660
		*		TEST I	LDING OF ONES ON ONES	3A123670
		*				3A123680
		*****	*******	*********	*********	34123690
	********	*****	*******	*********	***************	3A123700
CORE	DATA OR	*LA- (3A123710
ADDR	INSTRUCTION	*BEL /	ATION FT	UPERANDS &	REMARKS IDESEQ# AT RIGHT	3A123720

0140 0		A180		N180	LD /FFFF	3A123740
01A1 0			BSC	EEZ	SK ON &, EVEN OR ZERO	3A123750
01A2 0			BSC	-	SK IF MINUS	3A123760
01A3 0	3UZA	_	DC	/302A	ERR ID & ERR WAIT	3A123770
0144 0	C045	-			ACC NOT # FFFF	3A123780
01A4 0 01A5 0			FD	N180	LD /FFFF	3A123790
0189 0			BSC	&EZ		3A123800
OTMO 0	7010		BSC	-		3A123810

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01A7 0 302B		DC	/302B	ERR ID & ERR WAIT	3A123820
	*			ACC NOT # FFFF	3A123830
01A8 0 1801		SRA	1	SHIFT RIGHT ONE	3A123840
	*		TEST	ABILITY OF ACC TO SHIFT	3A123850
01A9 0 4804		BSC	E		3A123860
01AA 0 7001		MDX	G181		3A123870
01AB 0 302C		DC	/302C	ERR ID & ERR WAIT	3A123880
	*			ACC NOT # 7FFF	3A123890
01AC 0 1801		SRA	1		3A123900
01AD 0 4804		BSC	E		3A123910
01AE 0 7001		MDX	G182		3A123920
01AF 0 302D		DC	/302D	ERR ID & ERR WAIT	3A123930
	*			ACC NOT # 3FFF	3A123940
0180 0 1801		SRA	1		3A123950
01B1 0 4804		BSC	E		3A123960
01B2 0 7001		MDX	G183		3A123970
0183 0 302E		DC	/302E	ERR ID & ERR WAIT	3A123980
010/ 0 1001	*			ACC NOT # 1FFF	3A123990
0184 0 1801		SRA	1		3A124000
0185 0 4804		BSC	E		3A124010
0186 0 7001		MDX	G184		3A124020
0187 0 302F		DC	/302F	ERR ID & ERR WAIT	3A124030
0188 0 1801	•	50.4		ACC NOT # OFFF	3A124040
0189 0 4804	:	SRA	1		3A124050
01BA 0 7001		BSC	E		3A124060
0188 0 3030		MDX DC	G185 /3030	EDD 10 C 500 WATT	3A124070
0100 0 3030		DC	73030	ERR ID & ERR WAIT	3A124080
01BC 0 1801	G185	SRA	1	ACC NOT # 07FF	3A124090
018D 0 4804	6103	BSC	Ę		3A124100
018E 0 7001		MDX	G186		3A124110
018F 0 3031		DC	/3031	ERP ID & ERR WAIT	3A124120
010. 0 3031	*	00	73031	ACC NOT # 03FF	3A124130 3A124140
01C0 0 1801	G186	SRA	1	ACC NO. P USIT	3A124150
O1C1 0 4804	0100	BSC	Ė		3A124160
01C2 0 7001		MDX	G187		3A124170
01C3 0 3032		DC	/3032	ERR ID & ERR WAIT	3A124180
	*		, 3032	ACC NOT # 01FF	3A124190
0104 0 1801	G187	SRA	1		3A124200
0105 0 4804		BSC	E		3A124210
01Ĉ6 0 7001		MDX	G188		3A124220
0107 0 3033		DC	/3033	ERR ID & ERR WAIT	3A124230
	*			ACC NOT # OOFF	3A124240
O1C8 0 1801	G188	SRA	1		3A124250
0109 0 4804		BSC	E		3A124260
01CA 0 7001		MDX	6189		3A124270
01CB 0 3034		DC	/3034	ERR ID & ERR WAIT	3A124280
	*			ACC NOT # 007F	3A124290
O1CC 0 1801	6189	SRA	1		3A124300
01CD 0 4804		BSC	E		3A124310
O1CE 0 7001		MDX	G18A		3A124320
01CF 0 3035		DC	/3035	ERR ID & ERR WAIT	3A124330
	*			ACC NOT # 003F	3A124340
01D0 0 1801	G18A	SRA	1		3A124350
01D1 0 4804		BSC	E		3A124360
0102 0 7001		MDX	G18B		3A124370
01D3 0 3036		DC	/3036	ERR ID & ERR WAIT	3A124380
	*			ACC NOT # 001F	3A124390
	G188	SRA	1		3A124400
0104 0 1801		BSC	E		3A124410
01D5 0 4804		MDX	618C	CDD 10 C CDC *****	3A124420
01D5 0 4804 01D6 0 7001		DC	/3037	ERR ID & ERR WAIT	3A124430
01D5 0 4804	_				3A124440
01D5 0 4804 01D6 0 7001 01D7 0 3037	*		_	ACC NOT # 000F	
01D5 0 4804 01D6 0 7001 01D7 0 3037 01D8 0 1801	* G18C	SRA	1	ACC NO! # UOUP	3A124450
01D5 0 4804 01D6 0 7001 01D7 0 3037 01D8 0 1801 01D9 0 4804		BSC	E	ACC NOT & COOP	3A124450 3A124460
01D5 0 4804 01D6 0 7001 01D7 0 3037 01D8 0 1801 01D9 0 4804 01DA 0 7001		B S C MD X	E G18D		3A124450 3A124460 3A124470
01D5 0 4804 01D6 0 7001 01D7 0 3037 01D8 0 1801 01D9 0 4804		BSC	E	ERR ID & ERR MAIT ACC NOT # 0007	3A124450 3A124460

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01DC 0 1801	G18D	SRA	1		3A124500
01DD 0 4804		BSC	E		3A124510
01DE 0 7001		MDX	G18E		3A124520
01DF 0 3039	_	DC	/3039	ERR ID & ERR WAIT	5A124530 3A124540
0150 0 1001	*	CD 4	,	ACC NOT # 0003	3A124550
01E0 0 1801 01E1 0 4804	G18E	SRA BSC	l E		3A124560
01E2 0 7001		MDX	618F		3A124570
01E3 0 303A		DC	/303A	ERR ID & ERR WAIT	3A124580
	*			ACC NOT # 0001	3A124590
01E4 0 1801	G18F	SRA	1		3A124600
01E5 0 4804		BSC	E		3A124610
01E6 0 303B		DC	/303B	ERR ID & ERR WAIT	3A124620
	*	255	•	ACC NOT # 0000	3A124630 3A124640
01E7 0 4820		BSC	Z /303C	ERR ID & ERR WAIT	3A124650
01E8 0 303C	*	DC	73030	ACC NOT # 0000	3A124660
0169 0 7001	-	MDX	Alco	EXIT TO NEXT ROUTINE	3A124670
Olea O FFFF	N180	DC	/FFFF		3A124680
	*				3A124690
	*			ABILITY TO LOAD ZEROS	3A124700
	*			P OF ZEROS AND ONES ON	3A124710
	*		TOP C	OF ZEROS	3A124720 3A124730
	*			*******	3A124730
*****	年平平平 2 2 2 2 2 2 2	*******	·	********	
CORE DATA OR		OPER-			3A124760
ADDR INSTRUCTION	*BEL	ATION FT	DPERANDS &	REMARKS ID&SEQ# AT RIGHT	
******	*****	******	********	*********	3A124780
01EB 0 C007	Alco	LD	N1CO	LD /0000	3A124790
01EC 0 4820		BSC	2	SK ON ZERO	3A124800
01ED 0 303D		DC	/303D	ERR ID & ERR WAIT	3A124810
	*			ACC NOT # ZERO LD /FFFF	3A124820 3A124830
01EE 0 C005		LD BSC	N1C1 &EZ	LD /FFFF	3A124840
01EF 0 482C 01F0 0 4810		BSC	-	SK ON MINUS	3A124850
01F1 0 303E		DC	/303E	ERR ID & ERR WAIT	3A124860
0171 0 3036	*	UC	75050	ACC NOT # FFFF	3A124870
01F2 0 7002		MDX	A1D0	EXIT TO NEXT ROUTINE	3A124880
01F3 0 0000	NICO	DC	/0000		3A124890
Olf4 O FFFF	NICI	DC	/ffff		3A124900
	*				3A124910
	*		TEST	EOR OPERATION	3A124920
	*			*******	3A124930 3A124940
0155 0 5016					3A124950
01F5 0 C01C 01F6 0 4820	AlDO	LD BSC	N1D1 2	LD /0000 SK ON ZERO	3A124960
01F7 0 303F		DC	/303F	ERR ID & ERR WAIT	3A124970
54 J Just	*			ACC NOT # ZERO	3A124980
01F8 0 F019		EOR	N1D1	ZERO WITH /0000	3A124990
01F9 0 4820		BSC	2	SK ON ZERO	3A125000
01FA 0 3040		DC	/3040	ERR ID & ERR WAIT	3A125010
	*			EOR OF O AND O FAILED	3A125020
01FB 0 C015		LD LD	N1DO	LD /FFFF	3A125030
01FC 0 F014 01FD 0 4820		E OR BSC	N1DO Z	ZERO WITH /FFFF	3A125040 3A125050
01FU 0 4820 01FE 0 3041		DC	/3041	ERR ID & ERR WAIT	3A125060
-2	*	-		EOR OF 1 AND 1 FAILED	3A125070
01FF 0 F011		E OR	N1D0		3Å125080
0200 0 4820		BSC	&EZ		3A125090
0201 0 4810		BSC	-		3A125100
0202 0 3042		DC	/3042	ERR ID & ERR WAIT	3A125110
	*			EOR OF 1 AND 0 FAILED	3A125120
0203 0 1801		SRA	1		3A125130 3A125140
0204 0 F00E 0205 0 4820		EOR BSC	N1D2		3A125150
0205 0 4820		DC B2C	Z /3043	ERR ID & ERR WAIT	3A125160
0200 U 3073	*		13043	EOR OF 1 AND 0 FAILED	3A125170

		C009			LD		N1D0		3A125180
208			•		EOR		N1D1		3A125190
209	0	482C			BSC		&EZ		3A125200
020A					BSC		-		3A125210
020B	0	3044			DC		/3044	ERR ID & ERR WAIT	3A125220
				*				EOR OF O AND 1 FAILED	3A125230
20C	-				SRA		1		3A125240
020D	-				EOR		N1D2		3A125250
305C					BSC		2	500.10.4.5.4.	3A125260
020F	0	3045		*	DC		/3045	ERR ID & ERR WAIT	3A125270
0210	^	7002		•	MDX		AlEO	EOR OF O AND 1 FAILED EXIT TO NEXT ROUTINE	3A125280 3A125290
0211	-			N1D0	DC		/FFFF	EXIT TO NEXT KOOTINE	3A125300
0212				NID1	DC		/0000		3A125310
0213	-			N102	DC		/7FFF		3A125320
	•						• • • • • • • • • • • • • • • • • • • •		3A125330
				*			TES	T OF ABILITY TO SET	3A125340
				*			F B	IT TO ONE	3A125350
				*					3A125360
				****	****	***	*******	*******	3A125370
0214	0	C400	021F	Aleo	LD	L	NIEI	LD /0000	3A125380
0216	-				BSC		2	SK ON ZERO	3A125390
0217	0	3046			DC		/3046	ERR ID & ERR WAIT	3A125400
				*				WRONG LOCATION LOADED	3A125410
		C400	021E		LD	L	NIEO	LD C%N1EOm	3A125420
D21A					EOR		NIEO	CK ON 1500	3A125430
021B					BSC		2	SK ON ZERO	3A125440
021C	O	3041		*	DC		/3047	ERR ID & ERR WAIT	3A125450 3A125460
D21D	^	7002		•	MDX		A1F0	WRONG LOCATION LOADE EXIT TO NEXT ROUTINE	3A125470
0210 021E				NIEO	DC		N1EO	EXIT TO NEXT ROUTINE	3A125480
021E	-			NIEL	DC		/0000		3A125490
OL II	·	0000		*			, 0000		3A125500
				*			TES	T OF INDIRECT ADDRESSING	3A125510
				*					3A125520
				****	***	***	******	*******	3A125530
0220	0	C480	022C	Alfo	LD	I	N1F2	LD /0000	3A125540
0222	0	4820			BSC		Ζ.	SK ON ZERO	3A125550
0223	0	3048			DC		/3048	ERR ID & ERR WAIT	3A125560
				*		_		WRONG LOCATION LOADED	3A125570
	-	C480	022B		LD	I	N1F1	LD CWN1F1#	3A125580
0226					EOR		N1F1	ZERO WITH C%N1F1=	3A125590
	-	4820			BSC		73040	ERR ID & ERR WAIT	3A125600
0228	U	3047		•	DC		/3049	WRONG LOCATION LOADED	3A125620
0220	_	7003		•	MDX		A200	EXIT TO NEXT ROUTINE	3A125630
		7003 0000		N1F0	DC		/0000	CALL TO MEAT KOOTIME	3A125640
		022B		NIFI	DC		N1F1		3A125650
	_	0224		N1F2	DC		NIFO		3A125660
~~~	•	22E M		*					3A125670
				*			TES	T OF BSC LONG FORM AND	3A12568
				*				IRECT OPERATION	3A125690
				*			5.10		3A12570
								*******	3A125710
				*****				********	34125720
****	***	****	******			***			3-12-
***** CORE		DAT	A DR	***** *LA-	***** OPER-				3A125730
CORE ADDR		DATA	A OR Truction	***** *LA- *BEL	OPER- ATION	FT	OPERANDS	& REMARKS ID&SEQ# AT RIGHT	3A125730 3A125740
CORE ADDR	**1	DATA INS	A OR TRUCTION	***** *LA- *BEL ****	OPER- ATION	FT	OPERANDS		3A125730 3A125740 3A125750
CORE ADDR *****	***	DAT/ INS *****	A OR Truction	***** *LA- *BEL	OPER- ATION *****	FT	OPERANDS	& REMARKS ID&SEQ# AT RIGHT	3A125730 3A125740 3A125750 3A125760
CORE ADDR *****	***	DATA INS	A OR TRUCTION	***** *LA- *BEL *****	OPER- ATION	FT	OPERANDS	& REMARKS ID&SEQ# AT RIGHT	3A125730 3A125740 3A125750 3A125760 3A125770
CORE ADDR ***** 022D 022F	G 0	DATA INS 4C00 304A	A OR TRUCTION	***** *LA- *BEL ****	OPER- ATION ***** BSC DC	FT	OPERANDS ******** G200 /304A	& REMARKS ID&SEQ# AT RIGHT ************************************	3A125730 3A125740 3A125750 3A125760 3A125770 3A125780
CORE ADDR ***** 022D 022F	G 0	DAT/ INS *****	A OR TRUCTION	***** *LA- *BEL *****	OPER- ATION *****	FT	OPERANDS	& REMARKS ID&SEQ# AT RIGHT **********************************  ERR ID & ERR HAIT BSC DID NOT BRANCH ERR ID & ERR HAIT	3A12573( 3A12574( 3A12575( 3A125776) 3A12577( 3A12578( 3A12579(
CORE ADDR ***** 022D 022F 0230	G 0	DATA INS: 4C00 304A 304B	A OR TRUCTION	****** *LA- *BEL ***** A200	OPER- ATION BSC DC	FT	OPERANDS ************************************	& REMARKS ID&SEQ# AT RIGHT ************************************	3A12573 3A12574 3A12575 3A12576 3A12577 3A12578 3A12579 3A12580
CORE ADDR ****** 022D 022F 0230	0 0 0	DATA INS: 4C00 304A 304B	A DR TRUCTION ************************************	***** *LA- *BEL *****	OPER- ATION ***** BSC DC DC	FT *** L	OPERANDS ************************************	& REMARKS ID&SEQ# AT RIGHT **********************************  ERR ID & ERR WAIT BSC DID NOT BRANCH ERR ID & ERR WAIT BSC SKPD-SHOULD BRNCH	3A125730 3A125740 3A125750 3A125760 3A125770 3A125780 3A125790 3A125810
CORE ADDR ***** 022D 022F 0230 0231 0232	0 0	DATA INS: 4C00 304A 304B C03A 4C04	A OR TRUCTION	****** *LA- *BEL ***** A200	OPER- ATION ***** BSC DC DC DC	FT *** L	OPERANDS ************************************	& REMARKS ID&SEQ# AT RIGHT ************************************	3A125730 3A125740 3A125750 3A125760 3A125770 3A125770 3A125790 3A125800 3A125810 3A125820
CORE ADDR ***** 022D 022F 0230 0231 0232	0 0	DATA INS: 4C00 304A 304B	A DR TRUCTION ************************************	****** *LA- *BEL ***** A200 * * G200	OPER- ATION ***** BSC DC DC	FT *** L	OPERANDS ************************************	& REMARKS ID&SEQ# AT RIGHT **********************************  ERR ID & ERR WAIT BSC DID NOT BRANCH ERR ID & ERR WAIT BSC-SKPD-SHOULD BRNCH BR IF NOT EVEN ERR ID & ERR WAIT	3A125730 3A125740 3A125750 3A125776 3A125770 3A125780 3A125800 3A125810 3A125820 3A125830
CORE ADDR ****** 022D 022F 0230 0231 0232 0234	0 0 0 0	DATA INS: 4C00 304A 304B C03A 4C04	A DR TRUCTION ************************************	****** *LA- *BEL ***** A200	OPER- ATION ***** BSC DC DC DC	FT *** L	OPERANDS ************************************	& REMARKS ID&SEQ# AT RIGHT ************************************	3A125730 3A125740 3A125750 3A125760 3A125770 3A125770 3A125790 3A125800 3A125810 3A125820

	*				BSC SKPD-SHOULD BRNCH	3A125860
6224 0 4608 6224		вѕс	L G2	02,8	BR IF NOT PLUS	3A125870
0236 0 4C08 023A 0238 0 304E		DC		0216 04E	ERR ID & ERR WAIT	3A125880
0238 0 3046	*	UC	,,	046	BSC - DID NOT BRANCH	3A125890
0239 0 304F		DC	/2	04F	ERR ID & ERR WAIT	3A125900
0239 0 3047	•	DC	,,	041	BSC SKPD-SHOULD BRNCH	3A125910
023A 0 4C20 023E	G202	BSC	L G2	03•Z	DSC SKI D SHOOLD DKINGH	3A125920
023C 0 3050		DC		050	ERR ID & ERR WAIT	3A125930
0230 0 3030	*	<b>D</b> C	,,	030	BSC Z DID NOT SKIP	3A125940
023D 0 3051		DC	/3	051	ERR ID & ERR WAIT	3A125950
0230 0 3031	*	00	,,	031	BSC SKPD-SHOULD BRNCH	3A125960
C23E 0 4C10 0241	6203	BSC	L VI	54,-	BR IF NOT MINUS	3A125970
0240 0 7001	0203	MDX		04		3A125980
0241 0 3052	V154	DC		052	ERR ID & ERR WAIT	3A125990
02.12.0.2022	*				BSC SKPD-SHOULD NOT	3A126000
0242 0 2003	G204	LDS	3		SET C AND OF ON	3A126010
0243 0 4002 0247			L G2	05,C	BR IF CARRY IS ON	3A126020
0245 0 3053		DC	/3	053	ERR ID & ERR WAIT	. 3A126030
	*				BSC C DID NOT BRANCH	3A126040
0246 0 3054		DC	/3	054	ERR ID & ERR WAIT	3A126050
	*				BSC SKPD-SHOULD BRNCH	3A126060
0247 0 4C01 024B	G205	BSC	L G2	08,0	BR IF OF ON	3A126070
0249 0 3055		DC	/3	055	ERR ID & ERR WAIT	3A126080
	*				BSC O DID NOT BRANCH	3A126090
024A 0 3056		DC	/3	056	ERR ID & ERR WAIT	3A126100
	*				BSC SKPD-SHOULD BRNCH	3A126110
024B 0 4C01 024E	G208	BSC	L VI	68,0	BR IF OF ON	3A126120
024D 0 7001		MDX	62	206		3A126130
024E 0 3057	V168	DC	/3	057	ERR ID & ERR WAIT	3A126140
	*				BSC BRNCD-SHOULD NOT	3A126150
024F 0 2000	G206	LDS	0			3A126160
0250 0 4002 0253	-	BSC	L VI	70,C	BR IF CARRY IS OFF	3A126170
0252 0 7001		MDX	62	207		3A126180
0253 0 3058	V170	DC	/3	058	ERR ID & ERR WAIT	3A126190
	*				BSC BRNCD-SHOULD NOT	3A126200
0254 0 4001 0257	G207	BSC	L V1	74,0	BR IF OF ON	3A126210
0256 0 7001		MDX		209		3A126220
0257 0 30 <del>59</del>	V174	DC	/3	1059	ERR ID & ERR WAIT	3A126230
	*				BSC BRNCD-SHOULD NOT	3A126240
0258 0 CO14	G209	LD		201		3A126250
0259 0 4C18 025D				-3,A0	BR ON ZERO	3A126260
025B 0 305A		DC	/3	305 A	ERR ID & ERR WAIT	
		UC				3A126270
	*				BSC &- DID NOT BRANCH	3A126280
025C 0 305B		DC		305B	BSC &- DID NOT BRANCH ERR ID & ERR WAIT	3A126280 3A126290
	•	DC	/3		BSC &- DID NOT BRANCH	3A126280 3A126290 3A126300
025D 0 COOE		DC LD	/3 N2	200	BSC &- DID NOT BRANCH ERR ID & ERR WAIT	3A126280 3A126290 3A126300 3A126310
025D 0 C00E 025E 0 4C18 0261	•	DC LD BSC	/3 N2 L V1	200 80, &-	BSC &- DID NOT BRANCH ERR ID & ERR WAIT	3A126280 3A126290 3A126300 3A126310 3A126320
025D 0 C00E 025E 0 4C18 0261 0260 0 7001	# G2OA	DC LD BSC MDX	/3 N2 L V1 G2	200 180, &-	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330
025D 0 C00E 025E 0 4C18 0261	# G20A V180	DC LD BSC	/3 N2 L V1 G2	200 80, &-	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH ERR ID & ERR WAIT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C	* G20A V180	DC LD BSC MDX DC	/3 N2 L V1 G2 /3	200 180, &- 20D 305C	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340 3A126350
025D 0 C00E 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 C00B	# G20A V180	DC LD BSC MDX DC	/3 N2 L V1 G2 /3	200 180• &- 20D 305C	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH ERR ID & ERR WAIT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266	* G20A V180	DC LD BSC MDX DC LD BSC	/3 N2 L V1 G2 /3 N2 L V1	200 180• &- 20D 305C 202 184•&-	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH ERR ID & ERR WAIT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001	* G20A V180 * G20D	DC LD BSC MDX DC LD BSC MDX	/3 N2 L V1 G2 /3 N2 L V1 G2 G2	200 180, &- 20D 305C 202 184, &-	BSC &- DID NOT BRANCH ERR ID & ERR WAIT BSC SKPD-SHOULD BRNCH ERR ID & ERR WAIT BSC BRNCHED-SHOULDNT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370 3A126380
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266	* G20A V180 * G20D	DC LD BSC MDX DC LD BSC	/3 N2 L V1 G2 /3 N2 L V1 G2 G2	200 180• &- 20D 305C 202 184•&-	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT	3A126280 3A126290 3A126310 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370 3A126380 3A126390
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D	* G20A V180 * G20D V184 *	DC LD BSC MDX DC LD BSC MDX DC	/3 N2 L V1 G2 /3 N2 L V1 G2 /3	200  80, &=  200  805C  202  84, &=  208  805D	BSC &- DID NOT BRANCH ERR ID & ERR WAIT BSC SKPD-SHOULD BRNCH ERR ID & ERR WAIT BSC BRNCHED-SHOULDNT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370 3A126390 3A126400
025D 0 C00E 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 C00B 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F	* G20A V180 * G20D	DC LD BSC MDX DC LD BSC MDX DC SSC MDX DC	/3 N2 L V1 G2 /3 N2 L V1 G2 /3 I N2	200 80, &- 200 805C 202 84, &- 208 805D	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR WAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR WAIT BSC BRNCHED-SHOULDNT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370 3A126380 3A126390 3A126400 3A126410
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D	* G20A  V180 * G20D  V184 * G20B	DC LD BSC MDX DC LD BSC MDX DC	/3 N2 L V1 G2 /3 N2 L V1 G2 /3 I N2	200  80, &=  200  805C  202  84, &=  208  805D	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR WAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR WAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR WAIT ERR ID & ERR WAIT	3A126280 3A126290 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370 3A126380 3A126390 3A126410 3A126420
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E	* G20A V180 * G20D V184 *	DC LD BSC MDX DC LD BSC MDX DC SSC MDX DC	/3 N2 L V1 G2 /3 N2 L V1 G2 /3 I N2 /3	200 80, &- 200 805C 202 184, &- 208 805D	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126290 3A126310 3A126310 3A126320 3A126330 3A126350 3A126350 3A126360 3A126370 3A126380 3A126400 3A126410 3A126420 3A126430
025D 0 C00E 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 C00B 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F	* G20A V180 * G20D V184 * G20B	DC LD BSC MDX DC LD BSC MDX DC SSC MDX DC	/3 N2 L V1 G2 /3 N2 L V1 G2 /3 I N2 /3	200 80, &- 200 805C 202 84, &- 208 805D	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT	3A126280 3A126290 3A126310 3A126310 3A126330 3A126330 3A126350 3A126350 3A126360 3A126380 3A126390 3A126400 3A126400 3A126400 3A126400 3A126400
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E	* G20A V180 * G20D V184 * G20B *	DC LD BSC MDX DC LD BSC MDX DC  LD C C C C C C C C C C C C C C C C	/3 N2 L V1 G2 /3 N2 L V1 G2 /3 I N2 /3	200 180, &- 200 105C 202 184, &- 208 105D 203 105E	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126350 3A126350 3A126370 3A126370 3A126390 3A126400 3A126400 3A126400 3A126400 3A126400 3A126450
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F	* G20A  V180 * G20D  V184 * G20B  * G20C	DC LD BSC MDX DC LD BSC MDX DC  BSC DC  DC  MDX	/3 N2 L V1 G2 /3 I N2 I N2 /3 A2	200 80, &- 200 805C 202 84, &- 208 805D 203 805E	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126350 3A126350 3A126370 3A126370 3A126390 3A126490 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F	* G20A  V180 * G20D  V184 * G20B  * G20C N200	DC LD BSC MDX DC LD BSC MDX DC  DC  MDX DC  MDX DC	/3 N2 L V1 G2 /3 N2 L V1 G2 /3 I N2 /3 /3	200 80, &- 200 805C 202 184, &- 208 805D 203 805E	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126290 3A126310 3A126320 3A126330 3A126340 3A126350 3A126370 3A126380 3A126390 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F 026B 0 7004 026C 0 FFFF 026D 0 0000	# G20A  V180 # G20D  V184 # G20B # # G20C N200 N201	DC LD BSC MDX DC LD BSC MDX DC  C DC  MDX DC  DC  MDX DC  DC  MDX DC  DC	/3 N2 L V1 G2 /3 N2 L V2 G2 /3 I N2 /3 /3 /3	200 80, &- 200 805C 202 184, &- 208 805D 203 805E 805F	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126290 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126370 3A126380 3A126380 3A126490 3A126410 3A126420 3A126440 3A126450 3A126460 3A126460 3A126470 3A126480
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F 026B 0 7004 026C 0 FFFF 026D 0 0000 026E 0 0001	* G20A  V180  * G20D  V184  * G20B  * G20C  N200  N201  N202	DC LD BSC MDX DC LD BSC MDX DC  BSC DC  DC  MDX DC  DC  DC  DC	/3 N2 L V1 62 /3 N2 L V3 1 N2 /3 /3 /6 /6 /6	200 80, &- 200 805C 202 184, &- 208 805D 203 805E 805F 240 FFFF 9000 9001	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126390 3A126310 3A126320 3A126330 3A126340 3A126350 3A126360 3A126380 3A126390 3A126490 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126490
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F 026B 0 7004 026C 0 FFFF 026D 0 0000	# G20A  V180 # G20D  V184 # G20B # # G20C N200 N201	DC LD BSC MDX DC LD BSC MDX DC  C DC  MDX DC  DC  MDX DC  DC  MDX DC  DC	/3 N2 L V1 62 /3 N2 L V3 1 N2 /3 /3 /6 /6 /6	200 80, &- 200 805C 202 184, &- 208 805D 203 805E 805F	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126350 3A126350 3A126360 3A126380 3A126390 3A126410 3A126400 3A126400 3A126400 3A126470 3A126460 3A126470 3A126490 3A126490 3A126490
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F 026B 0 7004 026C 0 FFFF 026D 0 0000 026E 0 0001	* G20A  V180  * G20D  V184  * G20B  * G20C  N200  N201  N202	DC LD BSC MDX DC LD BSC MDX DC  BSC DC  DC  MDX DC  DC  DC  DC	/3 N2 L V1 62 /3 N2 L V3 1 N2 /3 /3 /6 /6 /6	200 80, &- 200 805C 202 84, &- 208 805D 203 805E 805F 240 FFF 9000 9001	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED EXIT TO NEXT ROUTINE	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126350 3A126350 3A126370 3A126370 3A126390 3A126490 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400 3A126400
025D 0 COOE 025E 0 4C18 0261 0260 0 7001 0261 0 305C 0262 0 COOB 0263 0 4C18 0266 0265 0 7001 0266 0 305D 0267 0 4C80 026F 0269 0 305E 026A 0 305F 026B 0 7004 026C 0 FFFF 026D 0 0000 026E 0 0001	* G20A  V180 * G20D  V184 * G20B  * G20C N200 N201 N202 N203 *	DC LD BSC MDX DC LD BSC MDX DC  BSC DC  DC  MDX DC  DC  DC  DC	/3 N2 L V1 62 /3 N2 L V3 1 N2 /3 /3 /6 /6 /6	200 80, &- 200 805C 202 84, &- 208 805D 203 805E 805F 240 FFF 9000 9001	BSC &- DID NOT BRANCH ERR ID & ERR MAIT BSC SKPD-SHOULD BRNCH  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT BSC BRNCHED-SHOULDNT  ERR ID & ERR MAIT INDIRECT BSC FAILED ERR ID & ERR MAIT INDIRECT BSC FAILED	3A126280 3A126290 3A126300 3A126310 3A126320 3A126330 3A126350 3A126350 3A126360 3A126370 3A126380 3A126490 3A126400 3A126410 3A126420 3A126450 3A126450 3A126460 3A126470 3A126490 3A126490 3A126490 3A126690

				*					3A126540
					*****	**	*********	**********	3A126550
	**		******			***	********	****************	3A126560
ORE		DATA			OPER-				3A126570
DDR			RUCTION	*BEL	ATION	FI	OPERANDS &		
****			*******			***	*****		3A126590
	-	4002		A240	BSI		N241	STORE ADDRESS OF 1 REG	3A12660
		0271		N240	DC		N240	STORE ADDRESS OF I REG	3A126610
212	U	3060		_	DC		/3060	ERR ID & ERR WAIT	3A126620
272	^	0000		* N241	DC		10000	BSI SKPD-SHOULD BRNCH RETURN ADDR FOR MAIN PROG	3A126630
		COFE		4541	LD		/0000 ·	LD RETURN ADDR	3A126640
		FOFB			EOR		N241 N240	ZERO IN RETURN ADDR	3A126650
		4820			BSC		7240 Z	ZEKU IN KETUKN ADDK	3A126660
	-	3061			DC		/3061	ERR ID & ERR WAIT	3A126680
	•	5001		*			73001	BSI NOT STORED I REG	3A126690
278	Λ	4408	0270	•	BSI	L	N243,&	STORE ADDR OF I REG	3A12670
		3062	VZID	VIAC	DC.		/3062	ERR ID & ERR WAIT	3A126710
	٠	3002		*			75002	BSI & DID NOT BRANCH	3A12672
27B	0	3063		•	DC		/3063	ERR ID & ERR WAIT	3A126730
•	•			*				BSI SKPD-SHOULD BNCH	3A12674
27C	O	027A		N242	DC		VIAC		3A126750
		0000		N243	DC		/0000	RETURN ADDR FOR MAIN PROG	3A12676
		COFE			LD		N243		3A126770
		FOFC			EOR		N242		3A12678
280	0	4820			BSC		2		3A12679
281	0	3064			DC		/3064	ERR ID & ERR WAIT	3A12680
				*				BSI NOT STORE I REG	3A12681
				*					3A126820
				*			TEST	OF INSTR REQUIRED FOR	3A126830
				*			ERROR	CONTROL	3A126840
				*					3A126850
				****	*****	***	********	*******	3A126860
		C048		A900	LD		F911	LD A NUMBER	3A126870
		D048			STO		F912		3A12688
_		C048			LD		F913		3A126890
	_	C046			LD		F912		3A12690
_		F044			EOR		F911		3A126910
		4820			BSC		2		3A126920
255	U	3065		_	DC		/3065	ERR ID & ERR WAIT	3A126930
200		C047		•			5010	STORE FAILED	3A126940
		C047			LD		F918	CK FIRST PASS SW \$/00020	3A126950
		4820 704C			BSC		Z A280	IS SW ON YES GO TO NEXT ROUTINE	3A126960
	_	C042			MDX			GET 0002	3A12698
	_	D043			LD Sto		F916	STORE /0002	3A12699
		1810			SRA		F918 16	CLEAR ACC	3A12700
		D400	0001		STO	L	/0091	ZERO WITH /0001	3A12701
		61FF	5001		LDX		-1	LD XR 1 WITH -1	3A12702
	-	C400	0001		LD	Ľ	-1 /0001	ZERO IN 1800 -1 FOR 1130	3A12703
		4820			BSC	-	2	ZERO FOR 1800	3A12704
		700F			MDX		G901	1130 CPU	3A12705
		C03B			rD nD		F919	1800 P-C LD /0240	3A12706
		D031			STO		F903	STO /0240 THIS IS AREA.	3A12707
		D400	0F67			L		* FUNCTION AND MODIFIER	3A12708
	-	D400				Ĺ		* FOR READING DATA ENTRY	3A12709
_		DO3A			STO	_	F007	* SWITCHES IN 1800	3A12710
		0836		G902	XIO		F922	SENSE SENSE/PROG SWS	3A127110
		E037			AND		F923	IGNORE CE SWS. \$/FF000	3A12712
		F036			EOR		F923	ZERO WITH /FF00	3A127130
			******	****		***		*********	3A12714
ORE			OR		OPER-				3A127150
DDR		INST	RUCTION	*BEL	ATION	FT	OPERANDS &	REMARKS ID&SEQ# AT RIGHT	3A12716
****	***							****************	
		4C18			BSC			BRANCH ON ZERO	3A12718
		F033			EOR		F923		3A127190
		3066			DC		/3066	ERROR ID & ERR WAIT	3A127200
200									

	*				+ FOURT TO AFFOR	24127220
02A4 0 70F8	•	MDX		G902	* EQUAL TO /FF00 REPEAT TEST	3A127220 3A127230
02A5 0 C02D	G901	LD		F920	1130 CPU LD /3A00	3A127240
02A6 0 D022	0,01	STO		F903	STO /3AOO THIS IS	3A127250
02A7 0 D400 0F67		STO	L	N8C2	* AREA. FUNCTION &	3A127260
02A9 0 D400 0FD3		STO	Ē	F004	* MODIFIER FOR READING	3A127270
02AB 0 D02B		STÓ	_	F007	* DATA ENTRY SWITCHES	3A127280
02AC 0 081B	<b>G900</b>	XIO		F902	TEST DATA ENTRY SWS	3A127290
02AD 0 C022		LD		F917	* FOR /FFFF	3A127300
OZAE O FOIF		EOR		F915		3A127310
02AF 0 4C18 02B4		BSC	L	-3,100x	BRANCH ON ZERO	3A127320
0281 0 F01C		EOR		F915		3A127330
0282 0 3067		DC		/3067	ERR ID & ERR WAIT	3A127340
	*				DATA ENTRY SWS NOT	3A127350
0303 0 3050	*				EQUAL TO /FFFF	3A127360
02B3 0 70F8 02B4 0 3001	×001	MDX		G900	65% 65W65 45555 AV.5	3A127370
0284 0 3001	X001 *	DC		/3001	SET SENSE/PROG AND	3A127380
	*				DATA ENTRY SWS TO	3A127390
02B5 0 CO13	•	LD		F903	ZEROS AND PUSH START	3A127400
0286 0 F01C		EOR		F920	CK FOR 1130 \$3A00-1130B	3A127410
0287 0 4C18 028F		BSC	L	G904.&-	XFER IF 1130	3A127420 3A127430
0289 0 081A	G903	X10	-	F922	TEST SENSE/PROG SWS	3A127440
OZBA O EOIB	0,03	AND		F923	IGNORE CE SWS. %/FF00m	3A127450
02BB 0 4C18 02BF		BSC	L	G904, &-	BRANCH IF OK	3A127460
02BD 0 3068		DC	_	/3068	ERR ID & ERR WAIT	3A127470
	*				SENSE/PROG SWS NOT	3A127480
	*				* EQUAL TO /0000	3A127490
02BE 0 70FA		MDX		G903	REPEAT TEST	3A127500
02BF 0 0808	G904	XIO		F902	TEST DATA ENTRY SWS	3A127510
02CO 0 COOF		LD		F917	* FOR /0000	3A127520
0201 0 4018 0205		BSC	L	-3,E00X	BRANCH ON ZERO	3A127530
0203 0 3069		DC		/3069	ERR ID & ERR WAIT	3A127540
	*				DATA ENTRY SWITCHES	3A127550
02C4 0 70FA	*	M0.4			* NOT EQ /0000	3A127560
02C5 0 3002	X003	MDX		G904	CET DIT CUITCUES AS	3A127570
0203 0 3002	*	DC		/3002	SET BIT SWITCHES AS	3A127580
	*				* DESIRED FOR RUN * AND PUSH START	3A127590
0206 0 7011	•	MDX		A280	EXIT TO NEXT ROUTINE	3A127600
0208 0000		BSS	E	A200	EXT. 10 MEX. KOUTTHE	3A127610 3A127620
0208 0 0200	F902	DC	_	F917		3A127630
0209 0 0240	F903	DC		/0240	EQUAL /3A00 IN 1130	3A127640
02CA O 02CA	F904	DC		F904	2000 7000 100 2000	3A127650
02CB 0 02CC	F911	DC		F912		3A127660
0200 0 0000	F912	DC		/0000		3A127670
02CD 0 0000	F913	DC		/0000		3A127680
OZCE O FFFF	F915	DC		/FFFF		3A127690
02CF 0 0002	F916	DC		/0002		3A127700
0200 0 0000	F917	DC		/0000		3A127710
0201 0 0000	F918	DC		/0000		3A127720
02D2 0 0240	F919	DC		/0240	1800 READ BIT SWS CONSTANT	
02D3 0 3A00	F920	DC		/3A00	1130 READ BIT SWS CONSTANT	
02D4 0 0000 02D5 0 0760	F922	DC		0	SENSE SENSE/PROG CON	3A127750
02D5 0 0780	F923	DC DC		/0760 /FF00		3A127760
0207 0 0240	F007	DC		/0240	EQUAL /3A00 IN 1130	3A127770 3A127780
321 6 6276			***		*************	3A127790
	*		-			3A127790
	*			BEGIN	ING OF SECTION OF	3A127810
	*				AM USING COMMON ERROR	3A127820
	*				DL ROUTINE	3A127830
	*					3A127840
	****	****	***	*********	*******	3A127850
	****	****	***	*******	*******	3A127860
	*					3A127870
	*			TEST (	DF SRA OPERATION	3A127880
	*					3A127890

****	**	****	******	*****	****	***	******	**********************	3A1279 3A1279
UNE		UAI	A UK	TLA-	UPER-				241270
ADDR		1 N2	IRUCTION	¥8EL	ATION	FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	
****	**		******	*****	*****	***	*******	**********************	3A1279
1200	U	CU 39		A280	LD		N280		3A1279
		1810			SRA		16		3A1279
			02DF		BSC	L	6280,8-	BRANCH ON ZERO	3A1279
02DC	0	4400	0F69		BSI	L	F000	SRA 16 FAILED	3A1279
DSDE	0	306A			DC		/306A	500 10	3A1279
020F	0	4400	OFC4	G280	BSI	L	F005	CK LOCK ON ERROR	3A1280
)2E1	0	70F6			MDX		A280	LOOP	
				****	****	***			341280
)2E2	0	CO 30		A281			N281	LD /8000	3A1280
2E3	0	180F			SRA		15	NOW A#/0001	3A1280
)2E4	0	F02F			EOR		N282	ZERO WITH /0001	3A1280
			02EA		BSC	L			3A1280
			0F69		BSI		F000		3A1280
		306B			DC			SRA 15 FAILED	3A1280
			OFC4	G281			/306B	ERP ID	3A1280
		70F5	01.64	0201		L	F005	CK LOCK ON ERROR	3A1280
220	٠	70, 7		****	MDX		A281	LOOP	3A1281
250	_	C 0 2 7				***		*******	3A1281
		C027		A282			N283	LD /AAAA	3A1281
		1801			SRA		1	NOW A#/5555	3A1281
	-	F026			E OR		N284	ZERO WITH /5555	3A1281
			02F5		BSC	L	G282,&-	BRANCH ON ZERO	3A1281
			0F69		B\$1	L	F000	SRA 1 FAILED	3A1281
2F4	0	306C			DC		/306C	ERR ID	3A1281
2F5	0	4400	OFC4	G282	851	L	F005	CK LOCK ON ERROR	3A1281
2F7	0	70F5			MDX		A282	LOOP	3A1281
				****	****	***		*******	3A1282
2F8	0	COID		A283			N284	LD /5555	
		1801			SRA		1	NOW A#/ZAAA	3A1282
2FA	0	FO1C			EOR		N285	ZERO WITH /ZAAA	3A1282
_	_		0300		BSC	L		BRANCH ON ZERO	3A1282
		4400				Ĺ	•		3A1282
		306D	0.07		DC	٠.		SRA 1 FAILED	3A1282
		4400	OEC4	G283			/306D	ERR ID	3A1282
		70F5	0, 04	0203	BS I MDX	L		CK LOCK ON ERROR	3A1282
JU2	٠						A283	LOOP	3A1282
303	^	COOF				***		*****	3A1282
				A284			N281	LD /8000	3A1283
		1801			SRA		1	NOW A# /4000	3A1283
		1802			SRA		2	A# /1000	3A1283
		1804			SRA		4	A#/0100	3A1283
		1808	•		SRA		8	A # /0001	3A1283
		FOOB			EDR		N282	ZERO WITH /0001	3A1283
			030E		BSC	L	G284,&-	BRANCH ON ZERO	3A1283
			0F69		BSI	L	F000	COMB SRA FAILED	3A1283
30D	0	306E			DC		/306E	ERR ID	3A1283
30E	0	4400	OFC4	G284	BSI	L	F005	CK LOCK ON ERROR	3A1283
		70F2		_	MDX	-	A284	LOOP	3A1284
		7006			MDX		AZCO	EXIT TO NEXT ROUTINE	
-		FFFF		N280	DC		/FFFF	EAT TO HEAT MUUTINE	3A1284
		8000		N281	DC		/8000		3A1284
		0001		N282	DC		/0001		3A1284
		AAAA		N283	DC		/AAAA		3A1284
		5555		N284	DC		/5555		3A12845
		2AAA		N285	DC				3A1284
'	•			M200	UC		/2AAA		3A12847
				•			Tret o	OF AND FUNCTION	3A12848
							1521 (	OF AND FUNCTION	3A12849
				*					3A12850
				****	*****	**	*********	**********	3A12851
	**			****	*****	***	********	**************	3A12852
			UB	*1 A-	OPER-				3A12853
DRE		DATA							
DRE					ATION	FΤ	OPERANDS &	REMARKS ID&SEQ# AT RIGHT	3A12854
**** OR E DD R ****	**	INST			ATION *****	FT ***	OPERANDS &	REMARKS IDESEQ# AT RIGHT	3A12854
ORE DDR		INST			ATION ****** LD	FT ***	********	REMAKKS ID&SEQ# AT RIGHT ************************************	3A12854 3A12855 3A12856

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					•	
031A 0 4C18 031F		BSC	Ĺ	62CO, &-	BRANCH ON ZERO	3A128580
031C 0 4400 0F69		BSI	L	F000	AND OF O AND FAILED	3A128590
031E 0 306F		DC		/306F	ERR ID	3A128600
031F 0 4400 DFC4	G2C 0	BSI	L	F005	CK LOCK ON ERROR	3A128610
0321 0 70F6		MDX		A2CO	LOOP	3A128620
			***	******	******	3A128630
0322 0 CO1F	A2C4	LD		NZCO	LD /0000	3A128640
0323 0 E01F		AND		N2C2	LD /FFFF	3A128650
0324 0 4018 0329		BSC	L		BRANCH ON ZERO	3A128660
0326 0 4400 0F69		BSI	L	F000	AND OF O AND 1 FAILED	3A128670
0328 0 3070	cac.	DC		/3070	ERR ID	3A128680
0329 0 4400 OFC4	G2C4	BSI	L	F005	CK LOCK ON ERROR	3A128690
032B 0 70F6	****	MDX		A2C4	LOOP ********	3A128700
032C 0 C016	A2C8	LD		N2C2		3A128710
032D 0 E014	A200	AND		N2CO	LD /FFFF	3A128720
032E 0 4C18 0333		BSC		G2C8, &-	AND /0000 Branch on Zero	3A128730
0330 0 4400 0F69		BSI	Ĺ	F000	AND OF 1 AND 0 FAILED	3A128740 3A128750
0332 0 3071		DC.	-	/3071	ERR ID	3A128760
0333 0 4400 OFC4	G2C8	BSI	L	F005	CK LOCK ON ERROR	3A128770
0335 0 70F6	0200	MDX	_	A2C8	LOOP	3A128780
	****	_	***		******	3A128790
0336 0 COOC	AZCC	LD		N2C2	LD /FFFF	3A128800
0337 0 E00B		AND		N2C2	AND /FFFF	3A128810
0338 O FOOA		EOR		N2C2	ZERO WITH /FFFF	3A128820
0339 0.4C18 033E		BSC	L	G2CC,&-	BRANCH ON ZERO	3A128830
033B 0 4400 0F69		BSI	L	F000	AND OF 1 AND 1 FAILED	3A128840
033D 0 3072		DC		/3072	ERR ID	3A128850
033E 0 4400 OFC4	G2CC	BSI	L	F005	CK LOCK ON ERROR	3A128860
0340 0 70F5		MDX		A2CC	LOOP	3A128870
0341 0 7002		MDX		A300	EXIT TO NEXT ROUTINE	3A128880
0342 0 0000	N2C0	DC		/0000		3A128890
0343 O FFFF	N2C2	DC		/FFFF		3A128900
	*					2412222
						3A128910
	*			TEST	OF OR FUNCTION	3A128910 3A128920
	*					
	*	****	***:	****	*****	3A128920 3A128930
	* * ***** *****	****	***	****		3A128920 3A128930 3A128940 3A128950
CORE DATA OR	* * ***** *****	***** OPER-	***	********	****************	3A128920 3A128930 3A128940 3A128950 3A128960
CORE DATA OR ADDR INSTRUCTION	* ***** ***** *LA-   *BEL	***** OPER- ATION	***: FT	**************************************	**************************************	3A128920 3A128930 3A128940 3A128950 3A128960 3A128970
CORE DATA OR ADDR INSTRUCTION	* *****  *****  *BEL   ****	***** OPER- ATION ****	***: FT	**************************************	**************************************	3A128920 3A128930 3A128940 3A128950 3A128960 3A128970 3A128980
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** ***** *LA-   *BEL	***** OPER- ATION *****	***: FT	**************************************	**************************************	3A128920 3A128930 3A128940 3A128950 3A128960 3A128970 3A128980 3A128990
CORE DATA OR ADDR INSTRUCTION ************************************	* *****  *****  *BEL   ****	***** OPER- ATION ***** LD OR	***: FT ***:	**************************************	**************************************	3A128920 3A128930 3A128940 3A128950 3A128960 3A128970 3A128980 3A128990 3A129900
CORE DATA OR ADDR INSTRUCTION ************************************	* *****  *****  *BEL   ****	***** OPER- ATION **** LD OR BSC	***: FT ***:	**************************************	**************************************	3A128920 3A128930 3A128940 3A128950 3A128960 3A128970 3A128980 3A128990 3A129000 3A129000
CORE DATA OR ADDR INSTRUCTION ************************************	* *****  *****  *BEL   ****	***** OPER- ATION **** LD OR BSC BSI	***: FT ***:	**************************************	**************************************	3A128920 3A128930 3A128940 3A128950 3A128960 3A128970 3A128980 3A128990 3A129000 3A129010 3A129020
CORE DATA OR ADDR INSTRUCTION ************************************	* *****  *****  *BEL   ****	***** OPER- ATION **** LD OR BSC BSI DC	FT ***: L	**************************************	REMARKS ID&SEQ# AT RIGHT LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID	3A128920 3A128930 3A128950 3A128950 3A128970 3A128980 3A128980 3A128990 3A129000 3A129010 3A129030
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** ***** *LA- *BEL *****	***** OPER- ATION **** LD OR BSC BSI	***: FT ***:	OPERANDS ε************************************	REMARKS ID&SEQ# AT RIGHT LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR	3A128920 3A128930 3A128950 3A128950 3A128970 3A128980 3A128980 3A129000 3A129010 3A129020 3A129030 3A129040
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** ***** *LA- *BEL *****	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX	FT ***: L L	**************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A128920 3A128930 3A128950 3A128950 3A128960 3A128970 3A128980 3A128990 3A129010 3A129010 3A129020 3A129030 3A129040 3A129050
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** ***** *LA-  *BEL   *A300	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX	FT ***: L L	**************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A128920 3A128930 3A128950 3A128950 3A128960 3A128970 3A128980 3A128990 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129050
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** *LA- *BEL *A300  G300  *****	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX ****	FT ***: L L	**************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A128920 3A128940 3A128950 3A128950 3A128970 3A128980 3A128980 3A128980 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129060 3A129070
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** *LA- *BEL *A300  G300  *****	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX **** LD	FT ***: L L	**************************************	REMARKS ID&SEQ# AT RIGHT LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP LOOP LD /0000 OR /FFFF	3A128920 3A128940 3A128950 3A128950 3A128950 3A128970 3A128980 3A128980 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129050 3A129060 3A129060 3A129080
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** *LA- *BEL *A300  G300  *****	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX **** LD OR	FT ***: L L	**************************************	REMARKS ID&SEQ# AT RIGHT LD /0000 OR /0000 BRANCH ON ZERO OR OF O AND O FAILED ERR ID CK LOCK ON ERROR LOOP LOOP	3A128920 3A128930 3A128950 3A128950 3A128970 3A128980 3A128980 3A129090 3A129010 3A129010 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129080
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** *LA- *BEL *A300  G300  *****	***** OPER- ATION **** LD OR BSC BSC BSI DC BSI MDX *** LD OR EOR	FT ****	OPERANDS & ***********************************	REMARKS ID&SEQ# AT RIGHT LD /0000 OR /0000 BRANCH ON ZERO OR OF O AND O FAILED ERR ID CK LOCK ON ERROR LOOP LD /0000 OR /FFFF ZERO WITH /FFFF	3A128920 3A128930 3A128950 3A128950 3A128970 3A128980 3A128980 3A129090 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129060 3A129080 3A129080 3A129090 3A129090
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** *LA- *BEL *A300  G300  *****	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX **** LD OR EOR BSC	****  FT ***  L  L  ***	**************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFFF BRANCH ON ZERO	3A128920 3A128930 3A128950 3A128950 3A128970 3A128980 3A128980 3A129090 3A129010 3A129010 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129080
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** *LA- *BEL *A300  G300  *****	***** OPER- ATION **** LD OR BSC BSI DC BSI MDX **** LD OR EOR BSC BSI	****  FT ***  L  L  ***	OPERANDS & ************************************	REMARKS ID&SEQ# AT RIGHT LD /0000 OR /0000 BRANCH ON ZERO OR OF O AND O FAILED ERR ID CK LOCK ON ERROR LOOP LD /0000 OR /FFFF ZERO MITH /FFFF BRANCH ON ZERO OR OF O AND 1 FAILED	3A128920 3A128940 3A128950 3A128960 3A128970 3A128980 3A128990 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129070 3A129070 3A129080 3A129080 3A129080 3A129090 3A129110
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** ****** **BEL / ****** A300	**** OPER ON **** LO BSC BSI DC BSI DC BSI MDX ** LD CR BSC BSI DR BSI DR BSC BSI DC BSI BSI DC BSI	FT **** L L L ***	**************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFFF BRANCH ON ZERO OR OF 0 AND 1 FAILED ERR ID CHECK LOOP SWITCH LOOP	3A128920 3A128940 3A128950 3A128950 3A128970 3A128980 3A128980 3A129900 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129090 3A129090 3A129090 3A129090 3A129100 3A129110 3A129110
CORE DATA OR ADDR INSTRUCTION ************************************	* ****** ****** *BEL *300 ****** G300 ******	**** OPER- ATION ** LD OR BSC BSI DCSI MDX *** LD OR BSC BSI DCSI MDX *** LD OR BSC BSI DC BSI MDX ****	FT **** L L L ***	**************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFFF BRANCH ON ZERO OR OF 0 AND 1 FAILED ERR ID CHECK LOOP SWITCH LOOP	3A128920 3A128940 3A128950 3A128950 3A128950 3A128970 3A128980 3A129900 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129090 3A129100 3A129110 3A129110
CORE DATA OR ADDR INSTRUCTION ************************************	* ***** ****** **BEL / ****** A300	**************************************	FT **** L L L ***	**************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFFF BRANCH ON ZERO OR OF 0 AND 1 FAILED ERR ID CHECK LOOP SWITCH LOOP  LOOP LOOP LOOP LOOP LOOP LOOP LO	3A128920 3A128930 3A128950 3A128950 3A128960 3A128970 3A128980 3A129900 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129080 3A129080 3A129100 3A129100 3A129110 3A129120 3A129130 3A129150 3A129150 3A129160
CORE DATA OR ADDR INSTRUCTION ************************************	* ****** ****** *BEL *300 ****** G300 ******	***** OPER- ATION **** LD OR BSCI DC BSCI DC BDX *** LD OR EDR BSCI DC BSI *** LD OR COR COR COR COR COR COR COR COR COR	FT **** L L L ***	OPERANDS & ************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF O AND O FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFF BRANCH ON ZERO OR OF O AND 1 FAILED ERR ID CHECK LOOP SWITCH LOOP  LD /FFFF CR /FFFF	3A128920 3A128940 3A128950 3A128960 3A128970 3A128980 3A128980 3A129090 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129060 3A129070 3A129100 3A129110 3A129130 3A129130 3A129150
CORE DATA OR ADDR INSTRUCTION ************************************	* ****** ****** *BEL *300 ****** G300 ******	***** OPER ATION **+* LOR BSCI DCS BDCS BDCS BDCS BDCS BDCS BDCS BDCS	* F* LL L * LL L **	**************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A128920 3A128940 3A128950 3A128950 3A128960 3A128970 3A128980 3A129900 3A129010 3A129020 3A129040 3A129050 3A129060 3A129070 3A129080 3A129080 3A129100 3A129100 3A129100 3A129110
CORE DATA OR ADDR INSTRUCTION ************************************	* ****** ****** *BEL *300 ****** G300 ******	***	*	**************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A128920 3A128940 3A128950 3A128950 3A128960 3A128980 3A128980 3A128990 3A129000 3A129010 3A129030 3A129040 3A129050 3A129050 3A129050 3A129050 3A129120 3A129120 3A129120 3A129120 3A129130 3A129150 3A129150 3A129180 3A129180 3A129180
CORE DATA OR ADDR INSTRUCTION ************************************	* ****** ****** *BEL *300 ****** G300 ******	****OPERON*  ATION*  LOR BSI DSIX*  LD BSI DSIX*  LD CORR BSI DC BSI BSI DC BSI BSI DC BSI	* F* LL L * LL L **	**************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A128920 3A128940 3A128950 3A128960 3A128970 3A128980 3A128980 3A129090 3A129010 3A129030 3A129030 3A129040 3A129050 3A129050 3A129060 3A129070 3A129080 3A129130 3A129110 3A129110 3A129110 3A129110 3A129110 3A129130
CORE DATA OR ADDR INSTRUCTION ************************************	******* **BEL ****** A300  G300 ****** A302	***	** F**	**************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A128920 3A128940 3A128950 3A128960 3A128970 3A128980 3A128980 3A129090 3A129000 3A129030 3A129030 3A129040 3A129050 3A129050 3A129060 3A129070 3A129100 3A129110 3A129110 3A129120 3A129130 3A129140 3A129150 3A129150 3A129150 3A129160 3A129190 3A129190 3A129190 3A129190 3A129190 3A129190 3A129190 3A129190 3A129190
CORE DATA OR ADDR INSTRUCTION ************************************	* ****** ****** *BEL *300 ****** G300 ******	****- OPERON* LOR BSSI BSSI BDC BBSSI	*	**************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFFF BRANCH ON ZERO OR OF 0 AND 1 FAILED ERR ID CHECK LOOP SWITCH LOOP  LD /FFFF CR ID CHECK LOOP SWITCH LOOP CHECK LOOP CHE	3A128920 3A128940 3A128950 3A128950 3A128960 3A128980 3A128980 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129090 3A129100 3A129190 3A129200 3A129210
CORE DATA OR ADDR INSTRUCTION ************************************	******* **BEL ****** A300  G300 ****** A302	****OPERON* OPERON* LOR BSCI BSCI BDC BDC BDC BSCI BDC BSCI BSCI BSCI BSCI BSCI BSCI BSCI BSCI	** F**	**************************************	REMARKS IDGSEQ# AT RIGHT  ***********************************	3A128920 3A128940 3A128950 3A128950 3A128950 3A128980 3A128980 3A129000 3A129010 3A129020 3A129030 3A129040 3A129050 3A129050 3A129060 3A129070 3A129100 3A129110 3A129120 3A129130 3A129140 3A129150 3A129150 3A129150 3A129150 3A129150 3A129170 3A129180 3A129190 3A129190 3A129190 3A129200 3A129200 3A129200 3A129220 3A129230
CORE DATA OR ADDR INSTRUCTION ************************************	******* **BEL ****** A300  G300 ***** A302  G302 ****** G304	***- OPERON* LOR CI IX** LOR CI BBC BBC BBC BBC BBC BBC BBC BBC BBC	** F**	**************************************	REMARKS ID&SEQ# AT RIGHT  LD /0000 OR /0000 BRANCH ON ZERO OR OF 0 AND 0 FAILED ERR ID CK LOCK ON ERROR LOOP  LD /0000 OR /FFFF ZERO WITH /FFFF BRANCH ON ZERO OR OF 0 AND 1 FAILED ERR ID CHECK LOOP SWITCH LOOP  LD /FFFF CR ID CHECK LOOP SWITCH LOOP CHECK LOOP CHE	3A128920 3A128940 3A128950 3A128950 3A128960 3A128980 3A128980 3A128980 3A129000 3A129010 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129120 3A129120 3A129130 3A129120 3A129130 3A129230 3A129220 3A129220 3A129220
CORE DATA OR ADDR INSTRUCTION ************************************	******* **BEL ****** A300  G300 ****** A302	****OPERON* OPERON* LOR BSCI BSCI BDC BDC BDC BSCI BDC BSCI BSCI BSCI BSCI BSCI BSCI BSCI BSCI	** F**	**************************************	REMARKS IDGSEQ# AT RIGHT  ***********************************	3A128920 3A128940 3A128950 3A128950 3A128960 3A128980 3A128980 3A129000 3A129010 3A129030 3A129040 3A129050 3A129060 3A129070 3A129080 3A129100 3A129100 3A129100 3A129100 3A129110 3A129110 3A129110 3A129120 3A129120 3A129130 3A129120 3A129130

0300	0	FFFF		N302	DC		/FFFF		3A12926
				•			TECT	OF RTE 16 OPERATION	3A12927
				*			1531	UP RIE 16 UPERATIUN	3A12928
				****	****	***	*******	******	3A12929
****	**	****	******	*****	****	***	*******	*************	3A12930
CORE		DAT	A OR	*LA-	OPER-				3A12931
ADDR		INS	TRUCTION	*BEL	ATION	FT	OPERANDS &	REMARKS ID&SEQ# AT RIGHT	3413633
****	**	****	******	*****	****	***	*******	************************	3412934
0367	0	CO16	•		LD		N340	LD /0000	3A12935
		1800			RTE		16	PLACE /0000 IN Q REG	3A12936
		CO 15			LD		N341	LD /FFFF	3A12937
		1800			RTE		16	NOW A#/0000 Q#/FFFF	3A12938
			0370		BSC	L	G340,&-	BRANCH ON ZERO	3A12939
			0F69		BSI	L	F000	ALL O THRU Q FAILED	3A12940
		3076			DC		/3076	ERR ID	3A12941
			0F98	G340	BSI	L		CK LOCK ON ERROR	3A12942
		70F4			MDX		A340	LOOP	3A12943
		18DO FOOA			RTE		16	NOW A#/FFFF Q#/0000	3A12944
			037A		EOR		N341	ZERO WITH /FFFF	3A12945
			057A		BSC	L	G342, &-	BRANCH ON ZERO	3A12946
		3077			BSI	L	F000	ALL 1 THRU Q FAILED	3A12947
			OFC4	G342	DC BSI		/3077	ERR ID	3A12948
		70EA		UJ72	WDX B21	L	F005 A340	CK LOCK ON ERROR	3A12949
		7002			MDX		A340 A380	LOOP EXIT TO NEXT ROUTINE	3A12950
		0000		N340	DC		/0000	EXIL IN MEXI KONLINE	3A12951
		FFFF		N341	DC		/FFFF		3A12952
	Ī			*			,,,,,		3A12953
				*			TEST	OF SRT OPERATION	3A12954 3A12955
				*				OF SKI OFERMITON	3A12956
•				****	*****	***	********	******	3A12957
0380	0	C055		A380	LD	-	N380	LD /8000	3A12958
1860	0	18A0			SRT		32	NOW A#/FFFF Q#/FFFF	3A12959
382	0	F054			E OR		N381	EOR IN /FFFF	3A12960
383	0	4C18	0388		BSC	L	G380,&-	BRANCH ON ZERO	3A12961
			0F 69		BSI	L	F000	SRT 32-A REG FAILED	3A12962
		3078			DC		/3078	ERR ID	3A12963
			0F98	G380	BSI	L	F00E	CK LOCK ON ERROR	3A12964
		70F5			MDX		A380	LOOP	3A12965
		18D0			RTE		16	NOW A#/FFFF Q#/0000	3A12966
		FO4A			EOR		N381	EOR IN /FFFF	3A12967
			0392		BSC	L	G382,&-	BRANCH ON ZERO	3A12968
			0F69		BSI	L	F000	SRT 32-Q REG FAILED	3A12969
		3079	0564		DC	_	/3079	ERR ID	3A12970
		70EB	OFC4	G382	BSI	L	F005	CK LOCK ON ERROR	3A12971
1374	U	IUEB			MDX		C86A	LOOP	3A12972
1205	^	C042				· 平 平 4		*****	3A12973
		1840		A384	LD SRT		N382	LD /4000	3A12974
			039C				32	NOW A#/0000 Q#/0000	3A12975
			059C 0F69		BSC	L	G384, &-	BRANCH ON ZERO	3A12976
		307A	01 07		BS I DC	L	F000 /307A	SRT 32-A REG FAILED	3A12977
			OFC4	G384	BSI	L	F005	ERR ID CK LOCK ON ERROR	3A12978
		70F6	J. U.	JJ 57	MDX	-	A384	LOOP	3A12979
		18D0			RTE		16	NOW A#/0000 Q#/0000	3A12980
			03A5		BSC	L	G386, &-	BRANCH ON ZERO	3A129810
		_	0F69				F000	SRT 32-Q REG FAILED	3A12983
		307B	J. <b>J</b> ,		DC	-	/3078	ERR ID	3A12984
			OFC4	G386	BSI	L	F005	CK LOCK ON ERROR	3A12985
		70ED	=		MDX	-	A384	LOOP	3A12986
J •	-			*****		***		******	3A12987
	0	C030		A388	LD		N383	LD /5555	3A12988
BAE		188F			SRT		15	NOW A#/0000 Q#/0000	3A12989
			0345				G388, &-	BRANCH ON ZERO	3A12990
		4C18	USAF			_			
3A9	0		05AF			L	F000	SRT 15-A REG FAILED	3A129910
3A9	0	4400					F000 /30 <b>7</b> C	SRT 15-A REG FAILED ERR ID	3A129910 3A129920

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EC NO.

PROG ID

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CPU FUNCTION TEST

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

03B1 0 70F6			A388	LOOP	3A129940
0382 0 1800			16		DA129950 BA129960
0383 0 F026			N384	LETTO METTER FOR	3A129970
0384 0 4018 0			G38A,&-	DIVANIQUE ON ECHO	3A129980
0386 0 4400 0			F000	5 Es 4	3A129990
03B8 0 307D			/307D	CK LOCK ON ERROR	3A130000
0389 0 4400 0			F005 A388		3A130010
0368 0 70EC				********	3A130020
				******	
CORE DATA					3A130040
ADDR INSTR	UCTION #REL A	TION FT	OPERANDS &	REMARKS ID&SEQ# AT RIGHT	3A130050
******	********	******	*******	*********	3A130060
03BC 0 CO1C			N383	LD /5555	3A130070
03BD 0 1880		SRT	0	NOW A#/5555 Q#/0000	3A130080
03BE 0 1882		SRT	2 .	NOW A#/1555 Q#/4000	3A130090
03BF 0 1884		SRT	4	/0155 /5400	3A130100
0300 0 1886		SRT	6	/0005 /5550	3A130110
03C1 0 1888	,	SRT	8	/0000 /0555	3A130120
03C2 0 188A		SRT	10	/0000 /0001	3A130130
0303 0 4018 0			G38C,&-	BRANCH ON ZERO	3A130140
0305 0 4400 0			F000	SERIES SRT FAILED	3A130150
03C7 0 307E		DC	/307E	ERR ID	3A130160
0308 0 4400 0			FOOE	CK LOCK ON ERROR	3A130170 3A130180
03CA 0 70F1		MDX	A38C	LDDP NDW A#/0001 Q#/0000	3A130190
03CB 0 18D0		RTE	16 N385		3A130200
03CC 0 F00E		EOR	G38E • & -	BRANCH ON ZERO	3A130210
03CD 0 4C18 (			F000	SERIES SRT FAILED	3A130220
03CF 0 4400 0 03D1 0 307F		BSI L DC	/307F	ERR ID	3A130230
03D2 0 4400 (		BSI L	F005	CK LOCK ON ERROR	3A130240
03D4 0 70E7		MDX	A38C	LOOP	3A130250
03D5 0 7006		MDX	A3CO	EXIT TO NEXT ROUTINE	3A130260
03D6 0 8000		DC	/8000		3A130270
03D7 0 FFFF		DC	/FFFF		3A130280
03D8 0 4000		DC	/4000		3A130290
03D9 0 5555		DC	/5555		3A130300
OBDA O AAAA		DC	/AAAA		3A130310
0308 0 0001	N385	DC	/0001		3A130320
	*			*	3A130330
	*		TEST	OF RTE OPERATION	3A130340
	*				3A130350
		******		******	3A130360
03DC 0 C02F	A3C0	LD	N3C1	LD /AAAA	3A130370
03DD 0 18D0		RTE	16	NOW A#/0000 Q#/AAAA	3A130380
03DE 0 C02C		LD	N3C0	NOW A#/5555 Q#/AAAA	3A130390 3A130400
03DF 0 18CF		RTE	15	NOW A#/5554 Q#/AAAB ZERO WITH /5554	3A130410
03E0 0 F02E		EOR	N3C4	BRANCH ON ZERO	3A130420
03E1 0 4C18		BSC L BSI L		RTE 15-Q TO A FAILED	3A130430
03E3 0 4400 03E5 0 3080	UF69	BSI L DC	/3080	ERR ID	3A130440
03E6 0 4400	0F98 G3C0	BSI L	FOOE	CK LOCK ON ERROR	3A130450
03E8 0 70F3	UF98 63CU	MDX	A3CO	LOOP	3A130460
03E9 0 18D0		RTE	16	NOW A#/AAAB Q#/5554	3A130470
03EA 0 F025		EOR	N3C5	ZERO WITH /AAAB	3A130480
03EB 0 4C18	03F0	BSC L		BRANCH ON ZERO	3A130490
03ED 0 4400			F000	RTE 15-A TO Q FAILED	3A130500
03EF 0 3081	= :	DC	/3081	ERR ID	3A130510
C3FO 0 4400	OFC4 G3C2		F005	CK LOCK ON ERROR	3A130520
03F2 0 70E9		MDX	A3CO	LOOP	3A130530
				*******	3A130540
*********	*********	******	********	*********	
CORE DATA	OR +LA-	OPER-			3A130560
ADDR INST	RUCTION *BEL	ATION FT	OPERANDS 8	REMARKS ID&SEQ# AT RIGHT	3A130570
*********	*********	******	*******	*********	3A130580
03F3 0 C01A	A3C4	LD	N3C3	LD /8000	3A130590
03F4 0 18D0		RTE	16	NDW A#/XXXX Q#/8000	3A130600
03F5 0 CO17		LD	N3C2	LD /0000	3A130610

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

415490 415490C 419643 420403 420403A

•						
03F6 0 18C0		RTE		0	NDW A#/0000 Q#/8000	3A130620
03F7 0 18DF		RTE		31		3A130630
03F8 0 F018		EOR		N3C 6		3A130640
03F9 0 4C18 03FE			L	G3C4,&-	<del>-</del>	3A130650
03FB 0 4400 0F69			L	FC30	D	3A130660
03FD 0 3082		DC	_	/3082		3A130670
03FE 0 4400 0F98			L	FOOE		3A130680
0400 0 70F2		MDX	_	A3C4		3A130690
0401 0 18D0		RTE		16	NOW A-/0000 Q-/0000	3A130700
0402 0 4018 0407			L	G3C6,&-	BRANCH ON ZERO	3A130710
0404 0 4400 0F69			Ĺ	F000		3A130720
0406 0 3083		DC	_	/3083	ERR ID	3A130730
0407 0 4400 OFC4	G3C6		L	F005	CK LOCK ON ERROR	3A130740
0407 0 4400 0FC4 0409 0 70E9	6366	MDX	_	A3C4	LOOP	3A130750
040A 0 7007		MDX		A400	EXIT TO NEXT ROUTINE	3A130760
040B 0 5555	N3C0	DC		/5555	EXIT TO MEXT MOOTING	3A130770
040C O AAAA	N3C1	DC		/AAAA		3A130780
	N3C2	DC .		/0000		3A130790
040D 0 0000		DC .		/8000		3A130800
040E 0 8000	N3C3 N3C4	DC		/5554		3A130810
040F 0 5554	N3C5	DC		/AAAB		3A130820
0410 O AAAB		DC		/0001		3A130830
0411 0 0001	N3C6 *	DC		70001		3A130840
	•			TECT	OF SLA OPERATION	3A130850
	*			1631	OL SEM OLEKALION	3A130860
			**	*******	******	3A130870
0412 0 C400 0486	A400	LD	L	N400	LD /FFFF	3A130880
	A400	RTE	_	16	NOW A#/XXXX Q#/FFFF	3A130890
0414 0 18D0 0415 0 C400 04B6		LD	L	N400	LD /FFFF	3A1 30900
0417 0 1010		SLA	L	16	NOW A#/0000 Q#/FFFF	3A130910
0417 0 1010 0418 0 4C02 041D		BSC	L	G404,C	BR ON CARRY	3A130920
		BS1	Ĺ	F000	SLA 15-CARRY FAILED	3A130930
041A 0 4400 0F69 041C 0 3085		DC	L	/3085	ERR ID	3A130940
	6404			FOOE	CK LOCK ON ERROR	3A130950
041D 0 4400 0F98	G404	BSI MDX	L	A400	LOOP	3A130960
041F 0 70F2				G400.E-	BRANCH ON ZERO	3A130970
0420 0 4C18 0425		BSC	L		SLA 16-A REG FAILED	3A130980
0422 0 4400 OF69		BSI	L	F000	ERR ID	3A130990
0424 0 3084	6400	DC BSI		/3084 F00E	CK LOCK ON ERROR	3A131000
0425 0 4400 0F98	G400		L	A400	LOOP	3A131010
0427 0 70EA		MDX RTE		16	NOW A#/FFFF Q#/0000	3A131020
0428 0 1800		EOR		N400	ZERO WITH /FFFF	3A131030
0429 0 F400 0486			Ļ	G406. &-	BRANCH ON ZERO	3A131040
042B 0 4C18 0430		BSC BSI	L	F000	SLA 16-AFFECTED Q REG	3A131050
042D 0 4400 0F69		DC	_	/3086	ERR ID	3A131060
042F 0 3086	C404	BSI	L		CK LOCK ON ERROR	3A131070
0430 0 4400 OFC4	G406	WDX P21	L	A400	LOOP	3A131080
0432 0 70DF					*********	3A131090
					******	
	*LA-					3A131110
			FT	DPERANDS 8	REMARKS IDESEQ# AT RIGHT	
ADDR INSTRUCTIO	金金金金金金金	*****	***	******	*********	
0433 0 C400 04BB	A408	LD	L	N405	LD /0000	3A131140
	A-00	RTE	-	16	0000/#Q XXXXX Q#/0000	3A131150
0435 0 18D0 0436 0 C4GO 04BC		LD	L	N406	/FFFE /0000	3A131160
0438 0 1010		SLA	-	16	/0000 /0000	3A131170
		BSC	L	G407,C	BR ON CARRY	3A131180
0439 0 4002 0430		MDX	-	G40C	DR ON OHAM	3A131190
043B 0 7003 043C 0 4400 0F69	G407	BSI	L	F000	SLA 16- CARRY FAILED	3A131200
043E 0 3088	<del>5 70</del> 1	DC	-	/3088	ERR 1D	3A131210
	C40C	BSI	L	FOOE	CK LOCK ON ERROR	3A131220
043F 0 4400 0F98	640C	WDX	-	A408	LOOP	3A131230
0441 0 70F1 0442 0 4C18 0447		BSC	L	G408, &-	BRANCH ON ZERO	3A131240
		BSI	Ĺ	F000	SLA 16-A REG FAILED	3A131250
0444 0 4400 0F69		00	-	/3087	ERR 1D	3A131260
0446 0 3087 0447 0 4400 0F98	G408	BSI	L	FOOE	CK LOCK ON ERROR	3A131270
0447 0 4400 0F98	G-700	MDX	-	A408	LOOP	3A131280
0449 0 70E9 044A 0 18D0		RTE		16	NDW A#/0000 Q#/0000	3A131290
J442 0 1000				-		

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

415490 415490C 419643 420403 420403A

CPU	FUNCTION	TEST

0448 0 40							
	18 0450		BSC	L	G40E+&-	BRANCH ON ZERO	3A131300
044D 0 44	400 OF69			Ē	F000	SLA 16-AFFECTED 2 REG	3A131310
044F 0 30			DC	_			
					/3089	ERR ID	3A131320
0450 0 44		G40E	BSI	L	F005	CK LOCK ON ERROR	3A131330
0452 0 70	DE 0		MDX		A408	LOOP	3A131340
		*****	*****	***	*********	******	3A131350
0453 0 CC	067	8400	LD		N405	LD /00u0	3A131360
0454 0 18	BD0		RTE		16	NOW A#/XXXX Q#/0000	3A131370
0455 0 CO	063		LD		N403	LD /AAAA	3A131380
0456 0 10			SLA		1	NDH A#/5554 Q#/0000	3A131390
0457 0 40			BSC	L	H402,C	BRANCH ON CARRY	3A131400
0459 0 44	_		BSI	Ĺ	F000	SLA 1-CARRY FAILED	3A131410
045B 0 30			DC.	-	/308B	ERR ID	
	-	03					3A131420
0450 0 44		H402	BSI	L	FOOE	CK LOCK ON ERROR	3A131430
045E 0 70			MDX		B400	LOOP	3A131440
045F 0 F0	D 5A		EOR		N404	ZERO WITH /5554	3A131450
0460 0 40	C18 0465		BSC	L	H400,&-	BRANCH ON ZERO	3A131460
0462 0 44	400 OF69		BSI	L	F000	SLA 1-A REG FAILED	3A131470
0464 0 30	08A		DC		/308A	ERR ID	3A131480
0465 0 44	400 OF98	H400	BSI	L	FOOE	CK LOCK ON ERROR	3A131490
0467 0 70			MDX	_	B400	LOOP	3A131500
0468 0 18			RTE		16	NDW A#/0000 Q#/5554	3A131510
						BRANCH ON ZERO	
0469 0 40			BSC	L	H404, &-		3A131520
046B 0 44				L	F000	SRA 1-AFFECTED Q REG	3A131530
046D 0 30			DC		/308C	ERR ID	3A131540
046E 0 44	400 OFC4	H404	BSI	L	F005	CK LOCK ON ERROR	3A131550
0470 0 70	DE 2		MDX		B400	LOGP	3A131560
		*****	*****	***	*******	******	3A131570
0471 0 CC	049	8406	LD		N405	LD /0000	3A131580
0472 0 18			RTE		16	NDW A#/XXXX Q#/0000	3A131590
0473 0 CC			LD		N402	LD /5555	3A131600
0474 0 10			SLA			NOW A#/AAAA Q#/0000	3A131610
0475 0 40					1.		
				L	H407.C	BR ON CARRY	3A131620
0477 0 70			MDX	_	H405		3A131630
0478 0 44		H407	BSI	L	F000	SLA 1-CARRY FAILED	3A131640
047A 0 30	105						
U-774 U 30	700		DC		/308E	ERR ID	3A131650
047B 0 44		H405	DC BS1	L	/308E F00E	ERR ID CK LOCK ON ERROR	3A131650 3A131660
	400 OF98	H405		L			
047B 0 44	400 OF98 DF3	H405	BSI	L	FOOE	CK LOCK ON ERROR	3A131660
047B 0 44 047D 0 70 047E 0 F0	400 0F98 DF3 D3A	H405	BSI MDX EOR		F00E 8406 N403	CK LOCK ON ERROR LOOP ZERO WITH /AAAA	3A131660 3A131670 3A131680
047B 0 44 047D 0 70 047E 0 F0 047F 0 40	600 0F98 0F3 03A C18 0484	H405	BSI MDX EOR BSC	L	F00E B406 N403 H406,&-	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO	3A131660 3A131670 3A131680 3A131690
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44	600 0F98 DF3 D3A C18 0484 600 0F69	H <b>40</b> 5	BSI MDX EOR BSC BSI		F00E 8406 N403 H406+&- F000	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED	3A131660 3A131670 3A131680 3A131690 3A131700
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 30	400 0F98 0F3 03A 018 0484 400 0F69		BSI MDX EOR BSC BSI DC	L	F00E 8406 N403 H406,&- F000 /308D	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 30 0484 0 44	400 0F98 DF3 D3A C18 0484 400 0F69 D8D 400 0F98	H405	BSI MDX EOR BSC BSI DC BSI	L	F00E 8406 N403 H406,&- F000 /308D - F00E	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720
047B 0 44 047D 0 70 047E 0 FC 047F 0 40 0481 0 44 0483 0 30 0484 0 44 0486 0 70	000 0F98 0F3 03A C18 0484 600 0F69 08D 600 0F98		BSI MDX EOR BSC BSI DC BSI MDX	L	F00E 8406 N403 H406+&- F000 /308D - F00E 8406	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 44 0486 0 70 0487 0 18	000 0F98 0F3 03A 018 0484 400 0F69 08D 400 0F98 0EA		BSI MDX EOR BSC BSI DC BSI MDX RTE	L L	F00E 8406 N403 H406+&- F000 /308D - F00E 8406	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730 3A131740
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 18	000 0F98 0F3 03A 118 0484 600 0F69 08D 600 0F98 0EA 8D0 118 048D		BSI MDX EOR BSC BSI DC BSI MDX RTE BSC	L	F00E B406 N403 H406,&- F000 /30BD - F00E B406 16 H408,&-	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730 3A131740 3A131750
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 44 0486 0 70 0487 0 18	000 0F98 0F3 03A 118 0484 600 0F69 08D 600 0F98 0EA 8D0 118 048D		BSI MDX EOR BSC BSI DC BSI MDX RTE	L L	F00E 8406 N403 H406+&- F000 /308D - F00E 8406	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730 3A131740 3A131750 3A131760
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 18	000 0F98 0F3 03A C18 0484 600 0F69 08D 600 0F98 0EA 8D0 C18 048D 600 0F69		BSI MDX EOR BSC BSI DC BSI MDX RTE BSC	L	F00E B406 N403 H406,&- F000 /30BD - F00E B406 16 H408,&-	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730 3A131740 3A131750
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 30 0484 0 70 0487 0 16 0488 0 40 0488 0 40	000 0F98 0F3 03A 01B 0484 600 0F69 08D 600 0F98 0EA 800 801 048D 6400 0F69		BSI MDX EOR BSC BSI DC BSI MDX RTE BSC BSI	L	F00E 8406 N403 H406,&- F000 /308D - F00E 8406 16 H408,&- F000	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730 3A131740 3A131750 3A131760
047B 0 44 047D 0 70 047E 0 F0 048B 0 44 048B 0 44 048B 0 70 048F 0 18 048B 0 44 048B 0 44	000 0F98 0F3 03A C18 0484 600 0F69 08D 600 0F98 0EA 8D0 C18 048D 6400 0F69 08F	H <b>40</b> 6	BSI MDX EOR BSC BSI DC BSI MDX RTE BSC BSI DC	L	F00E 8406 N403 H406+&- F000 /308D - F00E 8406 16 H408+&- F000 /308F	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131730 3A131740 3A131750 3A131760 3A131770 3A131770 3A131770
047B 0 44 047D 0 70 047E 0 FC 047F 0 40 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 18 0488 0 40 0480 0 44	000 0F98 0F3 03A C18 0484 600 0F69 08D 600 0F98 0EA 8D0 C18 048D 6400 0F69 08F	H <b>40</b> 6	BSI MDX EOR BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX	LLLLLL	F00E 8406 N403 H406,&- F000 /308D - F00E 8406 16 H408,&- F000 /308F F005 8406	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP	3A131660 3A131670 3A131680 3A131690 3A131700 3A131710 3A131720 3A131730 3A131740 3A131760 3A131770 3A131770 3A131770 3A131770 3A131770
047B 0 44 047D 0 70 047E 0 F0 048F 0 40 048B 0 44 048B 0 40 048B 0 40 048B 0 40 048B 0 40 048B 0 30 048B 0 30 048B 0 70	000 0F98 0F3 03A C18 0484 600 0F69 08D 600 0F98 0EA 8D0 C18 048D 600 0F69 08F 600 0FC4	H406	BSI MDX EOR BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX		F00E B406 N403 H406+&- F000 /308D F00E B406 16 H408+&- F000 /308F F005 B406	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP MOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP	3A131660 3A131670 3A131680 3A131700 3A131710 3A131710 3A131720 3A131730 3A131750 3A131760 3A131770 3A131770 3A131770 3A131780 3A131790 3A131800
047B 0 44 047D 0 70 047E 0 F0 047F 0 40 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 40 0488 0 40 048B 0 40 048B 0 40 048B 0 70	000 0F98 0F3 0F3 0C18 0484 600 0F69 08D 600 0F98 0EA 0C18 048D 600 0F69 08F 600 0FC4	H406 H408	BSI MDX E OR BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX		F00E B406 N403 H406+&- F000 /308D F00E B406 16 H408+&- F000 /308F F005 B406	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131720 3A131740 3A131750 3A131770 3A131770 3A131770 3A131780 3A131780 3A1318100 3A131810
047B 0 44 047D 0 70 047E 0 F0 048B 0 44 048B 0 44 048B 0 70 048F 0 18 048B 0 44 048C 0 30 048D 0 44 048F 0 70	AOO OF98 DF3 DF3 DF3 DF3 DF3 DF4 DF5 DF5 DF5 DF5 DF6	H408	BSI MDX E OR BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX ***********************************	L L L L L	FOOE B406 N403 H406+&- FOOO /308D - FOOE B406 16 H408+&- FOOO /308F FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP **********************************	3A131660 3A131670 3A131690 3A131700 3A131710 3A131720 3A131720 3A131750 3A131750 3A131760 3A131770 3A131770 3A131780 3A131780 3A131810 3A131820
047B 0 44 047D 0 70 047E 0 FC 048F 0 44 0481 0 44 0486 0 70 0487 0 18 0488 0 44 048C 0 30 048D 0 44 048F 0 70	400 0F98 0F3 0F3 0F3 0F3 0F4 400 0F69 0F4 0F5 0F6	H406 H408 *******	BSI MDX EOR BSC DC BSI MDX RTE BSC DC BSI MDX ***********************************	L L L L L	FOOE 8406 N403 H406,&- FOOE 8406 16 H408,&- FOOO /308F FOO5 8406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP LOOP LOOP LOOP LOOP LOOP LOOP	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131720 3A131740 3A131760 3A131770 3A131770 3A131770 3A131790 3A131800 3A131810 3A131810 3A131820 3A131830
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047B 0 44 047D 0 70 047E 0 FC 047F 0 40 0481 0 44 0483 0 36 0484 0 44 0486 0 70 0487 0 18 0488 0 40 0488 0 36 0488 0 70 0488 0 70 0488 0 70 0488 0 70 0488 0 70 0488 0 70 0488 0 70 0488 0 70	000 0F98 0F3 058 018 0484 400 0F69 080 060 0F98 060 0F69 08F 400 0F69 08F 400 0FC4 061 061 061 061 061 061 061 061	H406 H408 *******	BSI MDX EOR BSI DC BSI MDX RTE BSC BSI DC BSI MDX ***********************************	L L L L L	FOOE B406 N403 H406,&- FOOD /308D - FOOE B406 16 H408,&- FOOO /308F FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP LOOP LOOP LOOP LOOP LOOP LOOP	3A131660 3A131670 3A131680 3A131700 3A131710 3A131770 3A131770 3A131740 3A131770 3A131770 3A131770 3A131770 3A131770 3A131800 3A131810 3A131810 3A131810 3A131810 3A131850
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047B 0 44 047D 0 70 047E 0 FC 047F 0 46 048I 0 44 0483 0 30 0484 0 44 0486 0 70 048R 0 44 048B 0 44 048B 0 70 049B 0 60	400 0F98 0F3 0F3 0F3 0F3 0F3 0F4 0F69 0F69 0F6 0F69 0F69 0F69 0F69 0F69	H406 H408 ******	BSI MDX EOR BSCI DC BSI MDX RTE BSCI DC BSI MDX ***********************************	L L L L FT   1 2	FOOE 8406 N403 H406,&- FOOD /308D - FOOE 8406 16 H408,&- FOOO /308F FOO5 8406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP **********************************	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131720 3A131740 3A131760 3A131760 3A131770 3A131780 3A131800 3A131810 3A131810 3A131820 3A131840 3A131850 3A131850 3A131860 3A131860 3A131880 3A131880
047B 0 44 047D 0 70 047E 0 FC 047F 0 46 0481 0 44 0483 0 36 0484 0 44 0486 0 70 0487 0 18 0488 0 44 0486 0 30 0488 0 44 0488 0 50 0488 0 60 0488 0 60 0489 0 60 0491 0 18 0492 0 60 0494 0 62 0495 0 63	400 0F98 0F3 0F3 0F3 0F3 0F3 0F6	H406 H408 ******	BSI MDX EOR BSC BSI DC BSI MDX RTE BSC DC BSI MDX ***********************************	L L L L FT   1 2	FOOE B406 N403 H406,&- FOOE B406 16 H408,&- FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP LOOP LOOP LOOP LOOP LOOP LOOP	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131720 3A131740 3A131750 3A131770 3A131770 3A131770 3A131780 3A131800 3A131810 3A131820 3A131840 3A131850 3A131860 3A131860 3A131860 3A131890 3A131890 3A131890
047B 0 44 047D 0 70 047E 0 F0 047F 0 60 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 18 0488 0 44 0486 0 30 0480 0 44 048F 0 70  *********************************	400 0F98 0F3 0F3 0F3 0F3 0F3 0F4 0F5 0F5 0F5 0F5 0F5 0F7	H406 H408 ******	BSI MDX EOR BSI DC BSI MDX RTG BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L	FOOE B406 N403 H406,&- FOO0 /308D - FOOE B406 16 H408,&- FOO0 /308F FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP LOOP  ****************************	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131720 3A131750 3A131770 3A131770 3A131770 3A131770 3A131800 3A131810 3A131820 3A131820 3A131830 3A131850 3A131850 3A131870 3A131870 3A131870 3A131870 3A131890 3A131910
047B 0 44 047D 0 70 047F 0 F0 047F 0 F0 048B 0 44 048B 0 30 048B 0 44 048B 0 44 048B 0 44 048B 0 70 048B 0 70 048B 0 60 049B 0 10	400 0F98 0F3 0F3 0F3 0F3 0F3 0F4 0F6	H406 H408 ******	BSI MDX EOR BSI DC BSI MDX RTSC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI DC BSI BSI DC BSI BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L	F00E B406 N403 H406+&- F000 /308D - F00E B406 16 H408+&- F000 /308F F005 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP  *********************************	3A131660 3A131670 3A131690 3A131700 3A131710 3A131720 3A131720 3A131730 3A131750 3A131770 3A131770 3A131770 3A131780 3A131810 3A131810 3A131820 3A131840 3A131840 3A131840 3A131850 3A131860 3A131870 3A131880 3A131890 3A131890 3A131910 3A131910
047B 0 44 047D 0 70 047E 0 FC 047F 0 46 048I 0 44 0483 0 30 0484 0 44 0486 0 70 048R 0 44 048B 0 44 048B 0 64 048B 0 64 048B 0 66 0491 0 66 0492 0 66 0493 0 66 0495 0 66 0497 0 10 0498 0 10	400 0F98 0F3 0F3 0F3 0F3 0F3 0F4 0F6	H406 H408 ******	BSI MDX EOR BSI DC BSI MDX EBSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI DC BSI DC BSI DC BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	LL L L L +++++++++++++++++++++++++++++	FOOE B406 N403 H406+&- FOOD /308D - FOOE B406 16 H408+&- FOOO /308F FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP **********************************	3A131660 3A131670 3A131690 3A131700 3A131710 3A131720 3A131720 3A131730 3A131750 3A131760 3A131770 3A131770 3A131780 3A131810 3A131810 3A131820 3A131840 3A131840 3A131840 3A131840 3A131840 3A131840 3A131840 3A131870 3A131890 3A131890 3A131890 3A131930
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047B 0 44 047D 0 70 047E 0 FC 047F 0 46 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 18 0488 0 46 0488 0 46 0488 0 66 0490 0 CC 0491 0 18 0492 0 CC 0493 0 60 0494 0 66 0495 0 63 0496 0 10 0497 0 13 0498 0 16	400 0F98 0F3 0F3 0F3 0F3 0F3 0F6	H406 H408 ******	BSI MDX EGR BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L FT FT 123 1 2	FOOE B406 N403 H406,&- FOOE B406 16 H408,&- FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP **********************************	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131730 3A131740 3A131760 3A131770 3A131770 3A131770 3A131800 3A131810 3A131810 3A131820 3A131840 3A131850 3A131850 3A131850 3A131860 3A131870 3A131890 3A131990 3A131990 3A131990 3A131990 3A131990 3A131990
047B 0 44 047D 0 70 047E 0 F0 047E 0 F0 048B 0 44 048B 0 62 048B 0 62 049B 0 62 049B 0 62 049B 0 10 049B 0 10 049B 0 10	400 0F98 0F3 0F3 0F3 0F3 0F3 0F4 0F6	H406 H408 ******	BSI MDX EOR BSI DC BSI MDX BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L FT FT 123 1 2	FOOE B406 N403 H406,&- FOOD /308D FOOE B406 16 H408,&- FOOO /308F FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP **********************************	3A131660 3A131670 3A131690 3A131700 3A131710 3A131720 3A131720 3A131740 3A131760 3A131760 3A131770 3A131770 3A131780 3A13180 3A131810 3A131810 3A131820 3A131840 3A131850 3A131850 3A131870 3A131870 3A131890 3A131890 3A131990 3A131990
047B 0 44 047D 0 70 047E 0 FC 047F 0 46 0481 0 44 0483 0 30 0484 0 44 0486 0 70 0487 0 18 0488 0 46 0488 0 46 0488 0 66 0490 0 CC 0491 0 18 0492 0 CC 0493 0 60 0494 0 66 0495 0 63 0496 0 10 0497 0 13 0498 0 16	400 0F98 0F3 0F3 0F3 0F3 0F3 0F4 0F6	H406 H408 ******	BSI MDX EGR BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L FT FT 123 1 2	FOOE B406 N403 H406,&- FOOE B406 16 H408,&- FOO5 B406 ************************************	CK LOCK ON ERROR LOOP ZERO WITH /AAAA BRANCH ON ZERO SLA 1-A REG FAILED ERR ID CK LOCK ON ERROR LOOP NOW A\$/0000 Q\$/AAAA BRANCH ON ZERO SLA 1-AFFECTED Q REG ERR ID CK LOCK ON ERROR LOOP **********************************	3A131660 3A131670 3A131680 3A131700 3A131710 3A131720 3A131720 3A131740 3A131760 3A131770 3A131770 3A131770 3A131800 3A131810 3A131810 3A131820 3A131840 3A131850 3A131850 3A131850 3A131860 3A131870 3A131890 3A131890 3A131990 3A131990 3A131990 3A131990 3A131990

0440 0							
04A0 0	4400 OF69		BSI	L	F000	COMB SLA-CARRY FAILED	3A131980
	3091		DC		/3091	ERR ID	3A131990
	4400 OF98	H40D	BSI	L	FOOE	CK LOCK ON ERROR	3A132000
04A3 0			MDX		840A H40A,&-	LOOP	3A132010
	4C18 04A9		BSC			BRANCH ON ZERO	3A132020
	4400 OF69		BSI	L	F000	COMB SLA-A REG FAILED	3A132030
04A8 0	4400 OF98		DC		/3090	ERR ID	3A132040
04A9 0		H40A		L			3A13205C
04AC 0			MDX RTE		B40A	LOOP	3A132060
	4C18 04B2		BSC		16	BRANCH ON ZERO COMB SLA-AFFECTED Q	3A132070
	4400 OF69		BSI	-	F000	COMB SIA-AFEECTED O	34132000
04B1 0			DC	•	/3092	ERR ID	3A132100
	4400 OFC4	H40F			F005	CK LOCK ON ERROR	3A132110
04B4 0			MDX		B40A		3A132120
0485 0	7007		MDX		A440		3A132130
0486 0	FFFF	N400	DC		/FFFF		3A132140
0487 0	0001	N401	DC		/0001		3A132150
0488 0	5555	N402	DC		/5555		3A132160
0489 0	AAAA	N403	DC		/AAAA		3A132170
04BA 0	5554	N404	DC		/5554		3A132180
04BB 0	0000	N405	DC		/0000		3A132190
O4BC O	FFFE	N406	DC		/FFFE		3A132200
		*					3A132210
		•			TEST	OF SLT OPERATION	3A132220 3A132230
		*					
							3A132240
04BD 0		A440				LD /0001	3A132250
04BE 0			RTE		16	NDW A#/XXXX Q#Q#/0001	3A132260
04BF 0			LD		N441	LD /0000	3A132270
0400 0	10AU		SLT		32	/0000 Q#/0000	3A132280
0461 0	10A0 4C02 04C6 4400 0F69		BSC	-	6742,C	BRANCH ON CARRY SLT 32-CARRY FAILED	3A132290 3A132300
0405 0			DC		/3094	ERR ID	3A132310
0406 0	4400 OF98	6442			F00E	CK TUCK UN EBBUB	34132320
0408 0					A440	CK LOCK ON ERROR LOOP	34132330
	4C18 04CE		BSC	,	6440- 6-	BRANCH ON ZERO SLT 32-A REG FAILED	3A132340
	4400 0F69		BSI	Ĺ	F000	SLT 32-A REG FAILED	3A132350
04CD 0			DC		/3093	ERK ID	3A132360
O4CE O	4400 OF98	G440	BSI	L	FOOE	CK LOCK ON ERROR	3A132370
04D0 0	70EC		MDX		A440	LOOP	3A132380
04D1 0	1.800		RTE		16 6443, &-	NOW A#/0000 Q#/0000	3A132390
	1000				6443 6	BRANCH ON ZERO	Ja 1 J L J 7 U
	4C18 04D7		BSC	L	644316-	DRANCH ON EERO	3A132400
04D2 0			BSC BSI		F000	SLT 32-Q REG FAILED	
04D2 0 04D4 0 04D6 0	4C18 04D7 4400 0F69 3095					SLT 32-Q REG FAILED ERR ID	3A132400 3A132410 3A132420
04D2 0 04D4 0 04D6 0	4C18 04D7 4400 0F69		BS I DC	L	F000	SLT 32-Q REG FAILED ERR ID	3A132400 3A132410
04D2 0 04D4 0 04D6 0 04D7 0	4C18 04D7 4400 0F69 3095	G443	BSI DC BSI MDX	L	F000 /3095 F005 A440	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR	3A132400 3A132410 3A132420 3A132430 3A132440
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3	G443	BSI DC BSI MDX ****	L L	F000 /3095 F005 A440	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP	3A132400 3A132410 3A132420 3A132430 3A132440 3A132450
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3	G443 *****	BSI DC BSI MDX ****	L L ***	F000 /3095 F005 A440	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR	3A132400 3A132410 3A132420 3A132430 3A132440 3A132450 3A132460
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3	G443 ***** *******	BSI DC BSI MDX *****	L +** ***	F000 /3095 F005 A440	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP	3A132400 3A132410 3A132420 3A132430 3A132440 3A132450 3A132460 3A132470
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 DATA OR INSTRUCTIO	G443 ***** ****** *LA- ( ON *BEL /	BSI DC BSI MDX ***** OPER- ATION	L *** ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132430 3A132440 3A132440 3A132460 3A132460 3A132480
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 DATA OR INSTRUCTION	G443 ***** ******* *LA- ( ON *BEL (	BSI OC BSI MDX ***** OPER- ATION ****	L +** ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132430 3A132440 3A132450 3A132460 3A132470 3A132490
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 DATA OR INSTRUCTION	G443 ***** ****** *LA- ( ON *BEL /	BSI DC BSI MDX ***** ***** OPER- ATION *****	L +** ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132440 3A132440 3A132450 3A132460 3A132470 3A132490 3A132490 3A132500
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443 ***** ******* *LA- ( ON *BEL (	BSI DC BSI MDX ***** OPER- ATION ***** LD RTE	L +** ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132430 3A132440 3A132450 3A132460 3A132470 3A132480 3A132500 3A132500
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 DATA OR INSTRUCTION 1850 C063 1800 C060	G443 ***** ******* *LA- ( ON *BEL (	BSI DC BSI MDX ***** OPER- ATION **** LD RTE LD	L +** ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132440 3A132450 3A132470 3A132480 3A132480 3A132500 3A132500 3A132500
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 DATA OR INSTRUCTIO ************************************	G443 ***** ******* *LA- ( ON *BEL (	BSI DC BSI MDX ***** OPER- ATION **** LD RTE LD SLT	L *** *** FT	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132450 3A132470 3A132470 3A132490 3A132500 3A132500 3A132510 3A132520
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443 ***** ******* *LA- ( ON *BEL (	BSI DC BSI MDX **** ***** OPER- ATION **** LD RTE LD SLT BSC	L +** ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132450 3A132470 3A132470 3A132490 3A132500 3A132510 3A132520 3A132530 3A132540
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443 ***** ******* *LA- ( ON *BEL (	BSI DC BSI MDX ***** OPER- ATION **** LD RTE LD SLT BSC MDX	L *** *** FT	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132450 3A132470 3A132470 3A132490 3A132500 3A132500 3A132510 3A132520
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443 ***** ******* *LA- ( ON *BEL ( ******	BSI DC BSI MDX **** ***** OPER- ATION **** LD RTE LD SLT BSC	L ***  ***  FT ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132440 3A132440 3A132450 3A132460 3A132470 3A132490 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 04D8 0 04D8 0 04D8 0 04D8 0 04D8 0 04E8 0 04E8 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 DATA OR INSTRUCTION 1850 C060 1800 C060 1990 4C02 04E1 7003 4400 0F69 3097	G443 ***** ******* *LA- ( ON *BEL ( ******	BSI DC BSI MDX ***** OPER- ATION **** LD RTE LD SLT BSC MDX BSI DC	L ***  ***  FT ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132460 3A132470 3A132480 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 04D8 0 04D8 0 04D8 0 04D8 0 04D8 0 04E8 0 04E8 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( *******  A444	BSI DC BSI MDX ***** OPER- ATION **** LD RTE LD SLT BSC MDX BSI	L L **** FT ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132460 3A132470 3A132480 3A132500 3A132510 3A132520 3A132520 3A132520 3A132530 3A132540 3A132550 3A132550 3A132550 3A132550
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( *******  A444	BSI DC BSI MDX ***** OPER- ATION **** LD SLT BSC MDSI DC BSI	L L **** FT ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132440 3A132440 3A132450 3A132460 3A132470 3A132490 3A132500 3A132500 3A13250 3A13250 3A13250 3A13250 3A13250 3A13250 3A13250 3A13250 3A13250 3A13250 3A13250
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( *******  A444	BSI DC BSI MDX ****** OPERON ***** LD SLT BSC MDX BSI DCSI MDX	L L **** FT ***	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132450 3A132470 3A132470 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 04D7 0 04D8 0 04D8 0 04D8 0 04D8 0 04D8 0 04E1 0 04E3 0 04E4 0 04E4 0 04E7 0 04E8 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( *******  A444	BSI DC BSI MDX ****** OPER- ATION **** LD RTE LD SLT BSC MDX BSI DC BSI MDX EOR	L L ****     FT ***     L L L	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132460 3A132470 3A132480 3A132500 3A132510 3A13250 3A13250 3A13250 3A13250 3A132550 3A132550 3A132550 3A132560 3A132560 3A132560 3A132580
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 04D7 0 04D8 0 04D8 0 04D0 0 04D0 0 04E0 0 04E1 0 04E3 0 04E4 0 04E6 0 04E8 0 04E8 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( *******  A444	BSI DC BSI MDX ***** OPER- ATION *LD RTE LD SLT BSC MDXI DC BSI MDX EORC BSI DC	L L *** FT *** L L L L	F000 /3095 F005 A440 ***********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132460 3A132470 3A132480 3A132500 3A132510 3A132520 3A132520 3A132530 3A132550 3A132550 3A132550 3A132570 3A132580 3A132590 3A132590 3A132630
04D2 0 04D4 0 04D6 0 04D7 0 04D9 0 ************************************	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( *******  A444	BSI DC BSI MDX ************************************	L L *** FT *** L L L L	F000 /3095 F005 A440 **********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132440 3A132470 3A132470 3A132480 3A132500 3A132500 3A132500 3A132500 3A132500 3A132500 3A132550 3A132550 3A132560 3A132560 3A132600 3A132600 3A132600 3A132600 3A132640
04D2 0 04D4 0 04D6 0 04D7 0 04D7 0 04D7 0 04D8 0 04D8 0 04D0 0 04D0 0 04E0 0 04E1 0 04E3 0 04E4 0 04E6 0 04E8 0 04E8 0	4C18 04D7 4400 0F69 3095 4400 0FC4 70E3 ************************************	G443  ***** *LA- ( ON *BEL ( ******  A444  G446	BSI DC BSI MDX ***** OPER- ATION *LD RTE LD SLT BSC MDXI DC BSI MDX EORC BSI DC	L L **** F7 ***	F000 /3095 F005 A440 ***********************************	SLT 32-Q REG FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A132400 3A132410 3A132420 3A132440 3A132450 3A132460 3A132470 3A132480 3A132500 3A132510 3A132520 3A132520 3A132530 3A132550 3A132550 3A132550 3A132570 3A132580 3A132590 3A132590 3A132630

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CPU FUNCTION TEST

04FN 0 18D0	RTE	E	16	NOW A#/0000 Q#/C000	3A132660
04F1 0 4C18 04F6	850	C L	G448,&-	BRANCH ON ZERO	3A132670
04F3 0 4400 OF69	BS	I L	F000	SLT 16-Q REG FAILED	3A132680
04F5 0 3098	DC		/3098	ERR ID	3A132690
04F6 0 4400 OFC4		I L	F005	CK LOCK ON ERROR	3A132700
04F8 0 70E1	MD		A444	LOOP	3A132710
U4F8 U /UEI					
		*****		*****	3A132720
04F9 O CO45	A44A LD		N443	LD /5555	3A132730
04FA 0 18D0	RTI	E	16	NOW A#/XXXX Q#/5555	3A132740
04FB 0 C041	LD		N441	/0000 /5555	3A132750
04FC 0 108F	ŠĽ'		15	/2AAA /8000	3A132760
04FD 0 4C02 0500			G44C.C	BR ON CARRY	3A132770
			G44D	DR OR GARRY	3A132780
04FF 0 7003	MD			CLT 15 CARRY FAILER	
0500 0 4400 OF69		_	F000	SLT 15-CARRY FAILED	3A132790
0502 O 309A	DC		/309A	ERR ID	3A132800
0503 0 4400 OF98	G44D BS	I L	F00E	CK LOCK ON ERROR	3A132810
0505 0 70F3	MD	X	A44A	LOOP	3A132820
0506 0 F039	EO	R	N444	ZERO WITH /ZAAA	3A132830
0507 0 4C18 0500			G44A, &-	BRANCH ON ZERO	3A132840
			F000	SLT 15-A REG FAILED	3A132850
0509 0 4400 OF69					
050B 0 3099	DC		/3099	ERR ID	3A132860
050C 0 4400 OF98			FOOE	CK LOCK ON ERROR	3A132870
050E 0 70EA	MD:	X	A44A	LOOP	3A132880
050F 0 18D0	RTI	Ε	16	NOW A#/8000 Q#/0000	3A132890
0510 D F030	EO	R	N445	ZERO WITH /8000	3A132900
0511 0 4C18 0516			G44E,&-	BRANCH ON ZERO	3A132910
0513 0 4400 0F69			F000	SLT 15-Q REG FAILED	3A132920
					3A132930
0515 0 3098	DC		/309B	ERR ID	
0516 0 4400 OFC4			F005	CK LOCK ON ERROR	3A132940
0518 0 70E0	MD.	X	A44A	LOOP	3m132950
	*****	****	*******	*******	3A132960
**********	********	*****	******	**************	3A132970
COKE DATA OR	*LA- OPE	R-			3A132980
	TION *BEL ATI		OPERANDS E	REMARKS ID&SEQ# AT RIGHT	34132990
				******	
0519 0 CO22	B440 LD		N440	LD /0001	3A133010
0519 0 C022 051A 0 18D0	B440 LD Rt	E	N440 16	LD /0001 NDW A#/XXXX Q#/0001	3A133010 3A133020
0519 0 CO22	B440 LD	E	N440	LD /0001	3A133010
0519 0 C022 051A 0 18D0	B440 LD Rt	E	N440 16	LD /0001 NDW A#/XXXX Q#/0001	3A133010 3A133020
0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080	B440 LD RT LD SL	E	N440 16 N441 0	LD /0001 NOW A#/XXXX Q#/0001 LD /0000	3A133010 3A133020 3A133030
0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081	B440 LD RT LD SL SL	E T	N440 16 N441 0	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001 /0000 /0002	3A133010 3A133020 3A133030 3A133040 3A133050
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0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081 051E 0 1085 051F 0 1087 0520 0 1089 0521 0 108A 0522 0 4C02 052' 0524 0 4400 0F6' 0526 0 309D 0527 0 4400 0F9' 0528 0 4C18 052 052E 0 309C 052F 0 4400 0F6' 052E 0 309C 052F 0 4400 0F6' 0532 0 18D0 0533 0 4C18 053 0535 0 4400 0F6' 0537 0 309E 0538 0 4400 0F6' 0538 0 70DE 0538 0 70DE	B440 LD RT LD SL SL SL SL SL 7 BS 9 BS DC 8 H443 BS MD F BS 9 DC 8 H440 BS MD RT 8 BS MD	E T T T T T T T T T T T T T T T T T T T	N440 16 N441 0 1 5 7 9 10 H443,C F000 /309D F00E B440+&- F000 /309C F00E B440 16 H444,&- F000 /309E F005 B440 A480 /0001	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001	3A133010 3A133020 3A133030 3A133050 3A133060 3A133070 3A133080 3A133100 3A133110 3A133120 3A133150 3A133150 3A133150 3A133150 3A133150 3A133150 3A133150 3A133150 3A133170 3A133180 3A133190 3A133230 3A133230 3A133220 3A133230 3A133220 3A133230 3A133230 3A133240 3A133250 3A133250 3A133250
0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081 051E 0 1085 051F 0 1087 0520 0 1089 0521 0 108A 0522 0 4400 0F6 0526 0 309D 0527 0 4400 0F6 0528 0 4C18 052 0524 0 4400 0F6 0528 0 309C 052F 0 4400 0F6 052E 0 309C 052F 0 4400 0F6 0532 0 18D0 0533 0 4C18 053 0535 0 4400 0F6 0536 0 4400 0F6 0537 0 309E 0538 0 4400 0FC 0538 0 70DE 0538 0 70DE	B440 LD RT LD SL SL SL SL SL 7 BS 9 BS DC 8 H443 BS MD F BS 9 BS MD F BS 9 BS MD F BS 9 BS MD RT BB 9 BS NA440 BS MD RT BB	E T T T T T T T T T T T T T T T T T T T	N440 16 N441 0 1 5 7 9 10 H443,C F000 /309D F00E 8440 H440,E- F000 /309C F00E B440 16 H444+,E- F000 /309E F005 B440 A480 /0001 /0000	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001	3A133010 3A133020 3A133030 3A133040 3A133060 3A133070 3A133080 3A133090 3A133110 3A133120 3A133130 3A133150 3A133150 3A133150 3A133160 3A133170 3A133180 3A133190 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210
0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081 051E 0 1085 051F 0 1087 0520 0 1089 0521 0 108A 0522 0 4C00 0F66 0526 0 309D 0527 0 4400 0F66 0526 0 309C 0527 0 309C 0528 0 309C 0528 0 309C 0529 0 70E7 0532 0 18D0 0533 0 70E7 0533 0 70E7 0533 0 70E7 0533 0 4400 0F66 0537 0 309E 0538 0 70DE	B440 LD RT LD SL SL SL SL SL 7 BS 9 BS 0C 8 H443 BS MD F BS 9 BS MD F BS MD F BS MD F BS MD RT BBS MD RT B	E T T T T T T T T T T T T T T T T T T T	N440 16 N441 0 1 5 7 9 10 H443,C F000 /309D F00E B440 H440,&- F000 /309C F00E B440 16 H444,&- F000 /309E F005 B440 A480 /0001 /0000 /FFFF	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001	3A133010 3A133020 3A133030 3A133040 3A133060 3A133070 3A133080 3A133100 3A133110 3A133120 3A133150 3A133150 3A133150 3A133160 3A133170 3A133160 3A133170 3A133180 3A133200 3A133200 3A133200 3A133200 3A133220 3A133220 3A133230 3A133220 3A133230 3A133230 3A133240 3A133250 3A133250 3A133250 3A133280 3A133280 3A133280 3A133280
0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081 051E 0 1085 051F 0 1087 0520 0 1089 0521 0 108A 0522 0 4C02 052' 0524 0 4400 0F6' 0526 0 309D 0527 0 4400 0F6' 0526 0 309C 052F 0 4400 0F6' 052C 0 4400 0F6' 052C 0 4400 0F6' 052C 0 309C 052F 0 4400 0F6' 052C 0 309C 052F 0 309C 052F 0 4400 0F6' 052C 0 309C 052F 0 309C	B440 LD RT LD SL SL SL SL SL 7 BS 9 BS MD 6 H443 BS MD 6 B H440 BS MD 7 BS MD 8 BS MD	T T T T T T T T T T T T T T T T T T T	N440 16 N441 0 1 5 7 9 10 H443,C F000 /309D F00E 8440 H440,E- F000 /309C F00E B440 16 H444,E- F000 /309E F005 B440 A480 /0001 /0000 /FFFF /5555	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001	3A133010 3A133020 3A133030 3A133040 3A133060 3A133070 3A133080 3A133100 3A133110 3A133120 3A133120 3A133140 3A133150 3A133150 3A133160 3A133170 3A133180 3A133190 3A133200 3A133200 3A133220 3A133220 3A133220 3A133220 3A133230 3A133220 3A133230 3A133230 3A133240 3A133250 3A133270 3A133270 3A133280 3A133290 3A133290 3A133290
0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081 051E 0 1085 051F 0 1087 0520 0 1089 0521 0 108A 0522 0 4C02 052' 0524 0 4400 0F6' 0526 0 309D 0527 0 4400 0F9' 0529 0 70EF 052A 0 4C1B 052 052C 0 4400 0F6' 052E 0 309C 052E 0 309C 052F 0 4400 0F9' 0531 0 70E7 0533 0 4C1B 053 0534 0 70EF 0538 0 70DE 0538 0 70DE 0538 0 70DE 0538 0 70D6 053C 0 0001 053D 0 0000 053E 0 FFFF 053F 0 5555 0540 0 2AAA	B440 LD RT LD SL SL SL SL SL 7 BS 9 BS 0C 8 H443 BS MD F BS 9 BS MD RT BBS ND RT BBS N	E T T T T T T T T T T T T T T T T T T T	N440 16 N441 0 15 7 9 10 H443,C F000 /309D F00E B440 H440,E- F000 /309C F00E B440 16 H444,E- F000 /309E	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001	3A133010 3A133020 3A133030 3A133050 3A133060 3A133070 3A133080 3A133100 3A133110 3A133120 3A133130 3A133140 3A133150 3A133150 3A133170 3A133170 3A133170 3A133170 3A133200 3A133200 3A133200 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210
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0519 0 C022 051A 0 18D0 051B 0 C021 051C 0 1080 051D 0 1081 051E 0 1085 051F 0 1087 0520 0 1089 0521 0 108A 0522 0 4C02 052' 0524 0 4400 0F6' 0526 0 309D 0527 0 4400 0F9' 0529 0 70EF 052A 0 4C1B 052 052C 0 4400 0F6' 052E 0 309C 052E 0 309C 052F 0 4400 0F9' 0531 0 70E7 0533 0 4C1B 053 0534 0 70EF 0538 0 70DE 0538 0 70DE 0538 0 70DE 0538 0 70D6 053C 0 0001 053D 0 0000 053E 0 FFFF 053F 0 5555 0540 0 2AAA	B440 LD RT LD SL SL SL SL SL 7 BS 9 BS 0C 8 H443 BS MD F BS 9 BS MD RT BBS ND RT BBS N	E T T T T T T T T T T T T T T T T T T T	N440 16 N441 0 15 7 9 10 H443,C F000 /309D F00E B440 H440,E- F000 /309C F00E B440 16 H444,E- F000 /309E	LD /0001 NOW A#/XXXX Q#/0001 LD /0000 NOW A#/0000 Q#/0001	3A133010 3A133020 3A133030 3A133050 3A133060 3A133070 3A133080 3A133100 3A133110 3A133120 3A133130 3A133140 3A133150 3A133150 3A133170 3A133170 3A133170 3A133170 3A133200 3A133200 3A133200 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210 3A133210

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

EC NO. 415490 415490C 419643 420403 420403A

ns42 n						1231	OF SIG OPERATION	3A1 3334U
ns42 n			*					3A133350
1547 N			*****	*****	***	********	********	3A133360
JJ42 U	CO19		A480	LD		N480	LD /0000	3A133370
0543 0	D01 A			STO		N482	STO /0000	3A133380
0544 0	CO18			LD		N481	LD /FFFF	3A133390
0545 0	C018			LD		N482	LD /0000	3A133400
0546 0	4C18	0548		BSC	L	G480,&-	BRANCH ON ZERO	3A133410
0548 0	4400	0F69		BSI	L	F000	STO ZEROS FAILED	3A133420
54A 0		7		DC	_	/309F		3A133430
	4400	OFC4	G480	851	L			3A133440
054D 0		0104	0400	MDX	-	A480	LOOP	3A133450
ט ט⇔כנ	1054							
					***		******	3A133460
054E 0			A482			N481	LD /FFFF	3A133470
054F 0				STO		N482		3A133480
0550 0				LD		N480	LD /0000	3A133490
0551 0	COOC			LD		N482	LD /FFFF	3A133500
0552 0	FOOA			EOR		N481	ZERO WITH /FFFF	3A133510
0553 0	4C18	0558		BSC	L	G482,&-	BRANCH ON ZERO	3A133520
0555 0	4400	0F69		BSI	Ĺ	F000	STO ONES FAILED	3A133530
	30A0			DC	_	/30A0	ERR ID	3A133540
	4400	DECA	G482		L		CK LOCK ON ERROR	3A133550
055A 0		UFC-	0402	MDX	L	A482	LOOP	3A133560
055B 0				MDX		A4CO	EXIT TO NEXT ROUTINE	3A133570
	0000		N480	DC		/0000		3A133580
055D 0			N481	DC		/FFFF		3A133590
055E C	) FFFF		N482	DC		/FFFF		3A133600
			*					3A133610
			*			TEST	OF STS OPERATION	3A133620
			*					3A133630
			****	****	***	********	******	3A133640
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	DAT		*LA-					3A133660
ADDR						DOCDANDS C	REMARKS IDESEQ# AT RIGHT	
	142	IRUCIIUN	*0EL	AIIUR	_ r ı	UPERANUS C	**************************************	34133610
					***			
	2003		A4CO			3	455 4 445 65 655	3A133690
	2000			LDS		0	SET C AND OF OFF	3A133700
	285D							
0562 (				STS		N4CO		3A133710
	C05C			FD 212		N4CO		3A133720
	CO5C	0568			L	N4CO		3A133720 3A133730
0563 (				LD	L	N4C0 64C0,&-	STS FAILED TO STORE	3A133720
0563 ( 0565 (	4C18			LD BSC		N4C0 G4C0,&-	STS FAILED TO STORE ERR ID	3A133720 3A133730
0563 ( 0565 ( 0567 (	4C18 4400 30A1	0F69	6400	LD BSC BSI DC	L	N4C0 64C0,E- F000 /30A1	ERR ID	3A133720 3A133730 3A133740 3A133750
0563 ( 0565 ( 0567 ( 0568 (	4C18 4400 30A1 4400	0F69	G4C0	BSC BSI DC BSI		N4C0 G4C0,&- F000 /30A1 F005	ERR ID CK LOCK ON ERROR	3A133720 3A133730 3A133740 3A133750 3A133760
0563 ( 0565 ( 0567 (	4C18 4400 30A1 4400	0F69		BSC BSI DC BSI MDX	L	N4C0 64C0,&- F000 /30A1 F005 A4C0	ERR ID CK LOCK ON ERROR LOOP	3A133720 3A133730 3A133740 3A133750 3A133760 3A133770
0563 ( 0565 ( 0567 ( 0568 ( 056A (	4C18 4400 30A1 4400 70F4	OF69 OFC4	****	LD BSC BSI DC BSI MDX	L	N4C0 64C0+6- F000 /30A1 F005 A4C0	ERR ID CK LOCK ON ERROR	3A133720 3A133730 3A133740 3A133750 3A133760 3A133770 3A133780
0563 ( 0565 ( 0567 ( 0568 ( 056A (	4C18 4400 30A1 4400 70F4	OFC4		LD BSC BSI DC BSI MDX *****	L	N4C0 G4C0,&- F000 /30A1 F005 A4C0	ERR ID CK LOCK ON ERROR LOOP	3A133720 3A133730 3A133740 3A133750 3A133760 3A133770 3A133780 3A133790
0563 ( 0565 ( 0567 ( 0568 ( 056A ( 056B (	4C18 4400 30A1 4400 70F4 COFF 2003	OFC4	****	LD BSC BSI DC BSI MDX ***** LD LDS	L	N4C0 64C0,&- F000 /30A1 F005 A4C0 ************************************	ERR ID CK LOCK ON ERROR LOOP	3A133720 3A133730 3A133740 3A133750 3A133760 3A133770 3A133770 3A133790 3A133800
0563 ( 0565 ( 0567 ( 0568 ( 056A ( 056B ( 056C ( 056D (	4C18 4400 30A1 4400 70F4 COFF 2003 2851	OFC4	****	LD BSC BSI OC BSI MDX ***** LD LDS STS	L	N4C0 64C0,&- F000 /30A1 F005 A4C0 ************************************	ERR ID CK LOCK ON ERROR LOOP	3A133720 3A133730 3A133740 3A133750 3A133760 3A133770 3A133780 3A133780 3A133800 3A133810
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02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

EC NO. 415490 415490C 419643 420403 420403A

DATE

TEST OF STO OPERATION

PROG ID

03A1-1

	0580 0	30A5			DC		/30A5	ERR ID	3A134020
	058D 0	4400	OFC4	G4C6	BSI	L	F005	CK LOCK ON ERROR	3A134030
	058F 0	70DB			MDX		A4C 2	LOOP	3A134040
						***		*****	3A134050
	0590 0			A4C8	LDS		2	*** * ** ** **	3A134060
	0591 0 0592 0				LDS		2	SET C ON OF OFF SET /0002 IN N4CO	3A134070
	0593 0				STS STS		N4C0 N4C2	SET /0002 IN N4C2	3A134080 3A134090
	0594 0				LD		N4CO	LD /0002	3A134100
	0595 0				EOR		N4C3	ZERO WITH /0002	3A134110
•	0596 0		0598		BSC	L	G4C8, E-	GRANCH ON ZERO	3A134120
	0598 0	4400	0F69		BSI	Ĺ	F000	STS FAILED TO STORE	3A134130
	059A 0	30A6			DC		/30A6	ERR ID	3A134140
	057B 0		0F98	G4C8	BSI	L	FOOE	CK LOCK ON ERROR	3A134150
	059D O				MDX		A4C8	LOOP	3A134160
	059E 0				LD		N4C2	LD /0002	3A134170
	059F 0				BSC	Ļ		BRANCH ON ZERO	3A134180
	05A1 0 05A3 0	-	UFOY		BS I DC	L	F000 /30A7	STS NOT CLEAR CARRY ERR ID	3A134190 3A134200
	0544 0		DECA	G4CA	BSI	L	F005	CK LOCK ON ERROR	3A134210
	05A6 0		01.04	07CA	MDX	•	A4C8	LOOP	3A134220
	0340 0	.0.,		****		***		******	3A134230
	05A7 0	2003		A4CC	LDS		3		3A134240
	05A8 0	2001			LDS		1	SET C-OFF OF - ON	3A134250
	05A9 0	2815			STS		N4CO	SET /0001 IN N4C0	3A134260
	OSAA O				STS		N4C2	SET /0000 IN N4C2	3A134270
	OSAB O				LD		N4CO	LD /0001	3A134280
	05AC 0				EOR		N4C4	ZERD WITH /0001	3A134290
	05AD 0				BSC	L	G4CC, &-	BRANCH ON ZERO	3A134300
	05AF 0 05B1 0		01.69		BSI	L	F000	STS FAILED TO STORE	3A134310
	0582 0		OF OR	G4CC	DC BS I	L	/30A8 F00E	ERR ID CK LOCK ON ERROR	3A134320 3A134330
	0584 O		01 70	<del>0</del> CC	MDX	_	A4CC	LOOP	3A134340
	05B5 0				LD		N4C2	LD STATUS STORED	3A134350
	05B6 0		058B		BSC	L	G4CD, &-	BRANCH ON ZERO	3A134360
	05B8 0	4400	0F69		BSI	Ĺ	F000	STS NOT CLEAR OVERFL	3A134370
	05BA 0	30A9			DC		/30A9	ERR ID	3A134380
	05BB 0		OFC4	G4CD	BSI	L	F005	CK LOCK ON ERROR	3A134390
	05BD 0				MDX		A4CC	LOOP	3A134400
	05BE 0				MDX		A500	EXIT TO NEXT ROUTINE	3A134410
	05BF 0			N4CO	DC		/0003		3A134420
	0500 0			N4C1	DC		/0003		3A134430
	05C1 0 05C2 0			N4C2 N4C3	DC		/0000 /0002		3A134440 3A134450
	05C3 0	_		N4C4	DC		/0002		3A134460
		0001		*			,0001		3A134470
				•			TEST (	DF BSC OPERATION	3A134480
				*					3A134490
				****	****	***	******	*********	3A134500
		****	******	*****	****	***	******	*************	3A134510
	CURE		A DR	*LA-		_			3A134520
	ADDR	INS.	TRUCTION	*BEL			OPERANDS &		
	77777	ママママ 本:		*****	サンマ マママウ:	***	<del></del>	**********	
	05C4 0 05C5 0		0458	A500				SET C AND OF ON	3A134550
	0507 0		V070		LD BSC	L	N500 O&EZC	LD /8001 SK IF OF OFF, PLUS, EVEN,	3A134560 3A134570
		73E1			036		COLLO	* ZERO OR CARRY OFF.	3A134580
	05C8 0	7003			MDX		6500		3A134590
	0509 0		0F69		BSI	L	F000	BSC SKPD-SHOULD NOT	3A134600
	05CB 0	30AA			DC		/30AA	ERR ID	3A134610
	05CC 0		OFC4	G500	BSI	L		CK LOCK ON ERROR	3A134620
	05CE 0	70F5			MDX		A500	LOOP	3A134630
	0565 -					***		******	3A134640
	05CF 0		0450	A502	LDS		3	SET C & OF ON	3A134650
	05D0 0 05D2 0		ひのフザ		LD	L	N501	TD /0000	3A134660
	JJU2 0	4010		•	BSC		330-	SK IF MINUS, OF OFF, CARRY *OFF OR PLUS	3A134680
	05D3 O	7003		-	MDX		<b>6</b> 502	TOTT UK PLUS	3A134690
					·		- JUL		JA 2 J TO 70

	0		2512						
	J	4400	0669		BSI	L	F000	BSC SKPD-SHOULD NOT	3A134700
		30AB			DC		/30AB	ERR ID	3A134710
		4400	OFC4	G502	BSI	L	F005	CK LOCK ON ERROR	3A134720
05D9	0	70F5			MDX		A502	LOOP	3A134730
	_					***		*************	3A134740
		2003		A504	LDS		3	SET C AND OF ON	3A134750
		CO7E			LD		N502	LD /8000	3A134760
		2809 4815			STS		N507	SET /0003 IN N507	3A134770
		7001			BSC		0-E	SK IF OF OFF, MUNIS OR EVEN	
		7003			MDX		G504 G505		3A134790
		4400	0F69 '	G504	BSI	L		BSC FAILED TO SKIP	3A134800 3A134810
		30AC	0.07	0,04	DC.	-	/30AC	ERR ID	3A134820
	-	4400	0F98	<b>G505</b>	BSI	L	FOOE	CK LOCK ON ERROR	3A134830
		70F4			MDX	-	A504	LOOP	3A134840
05E6	0	2000		N507	LDS		*-*		3A134850
05E7	0	4801			BSC		0	SKIP IF OVERFLOW IS OFF	3A134860
05E8	0	4801			BSC		0		3A134870
05E9	0	7001			MDX		<b>G506</b>		3A134880
05EA	0	7003			MDX		<b>G507</b>		3A134890
05EB	0	4400	0F69	G506	BSI	L	F000	BSC NOT CLEAR OVERFLW	3A134900
05ED	0	30AD			DC		/30AD	ERR ID	3A134910
		4400	OFC4	<b>G507</b>	BSI	L	F005	CK LOCK ON ERROR	3A134920
05F0	0	70E9			MDX		A504	LOOP	3A134930
	_					***	********	*****	3A134940
	-	2000		A508	LDS		0	SET C AND OF OFF	3A134950
		C068			LD		N503	LD /0001	3A134960
05F3	0	482A		_	BSC		CEZ	SK IF CARRY OFF, PLUS	3A134970
0554	_	7001		*				* OR ZERO	3A134980
05F4		_			MDX		G508		3A134990
		7003 4400	0540	G508	MDX		H508	DCC 541150 70 6410	3A135000
05F8			UF69	6508	BS I DC	L	F000	BSC FAILED TO SKIP	3A135010
		4400	NEC4	H508	BSI		/30AE F005	ERR ID	3A135020
		70F5	UFC4	noue	MDX	L	A508	CK LOCK ON ERROR LOOP	3A135030 3A135040
05.0	٠			****		***1		*******	3A135050
05FC	0	2003		A50A	LDS		3	SET C AND OF ON	3A135060
05FD				~>~~	LD		N500	LD /8001	3A135070
		4COF	060F		BSC	L	G50A, &DCE	BR ON NOT PLUS, OF ON.	3A135080
				*				* CARRY ON OR NOT EVEN	3A135090
0600	0	7001			MDX		H50A		3A135100
0601	0	7007			MDX		J50A		3A135110
0602				***		L	F000	DCC CCLL TUBE	3~ 4 3 3 1 4 4 0
	0	4400	0F69	, H50A	BSI	_		BSC FELL THRU	3A135120
0604	0	30AF		HOUA	DC	•	/30AF	ERR ID	
0605	0	30AF 4400		, HOUA		L	/30AF		3A135120
0605 0607	0 0 0	30AF 4400 70F4		, HOUA	DC BSI MDX		/30AF F00E A50A	ERR ID	3A135120 3A135130 3A135140 3A135150
0605 0607 0608	0 0 0	30AF 4400 70F4 7006	0F98		DC BSI MDX MDX	L	/30AF F00E A50A G50A	ERR ID CK LOCK ON ERROR LOOP	3A135120 3A135130 3A135140 3A135150 3A135160
0605 0607 0608 0609	0 0 0 0	30AF 4400 70F4 7006 4400	0F98	J50A	DC BSI MDX MDX BSI		/30AF F00E A50A G50A F000	ERR ID CK LOCK ON ERROR LOOP BSC SKPD-SHOULD BRNCH	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170
0605 0607 0608 0609 0608	000000	30AF 4400 70F4 7006 4400 30B0	0F98 0F69		DC BSI MDX MDX BSI DC	L	/30AF F00E A50A G50A F000 /30B0	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180
0605 0607 0608 0609 060B 060C	000000	30AF 4400 70F4 7006 4400 30B0 4400	0F98 0F69		DC BSI MDX MDX BSI DC BSI	L	/30AF F00E A50A G50A F000 /30B0 F00E	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180 3A135190
0605 0607 0608 0609 0608 060C	0000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED	0F98 0F69	J50A	DC BSI MDX MDX BSI DC BSI MDX	L	/30AF F00E A50A G50A F000 /30B0 F00E A50A	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180 3A135190 3A135200
0605 0607 0608 0609 060B 060C 060E	00000000	30AF 4400 70F4 7006 4400 3080 4400 70ED F048	0F98 0F69		DC BSI MDX MDX BSI DC BSI MDX EOR	L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180 3A135190 3A135200 3A135210
0605 0607 0608 0609 060B 060C 060E 060F	000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820	0F98 0F69	J50A	DC BSI MDX MDX BSI DC BSI MDX EOR BSC	L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180 3A135190 3A135200 3A135220
0605 0607 0608 0609 060B 060C 060E 060F 0610	0000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001	0F98 0F69	J50A	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX	L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001	3A135120 3A135130 3A135140 3A135160 3A135160 3A135170 3A135180 3A135190 3A135200 3A135210 3A135210 3A135220
0605 0607 0608 0609 060B 060C 060E 060F 0610 0611	000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003	0F98 0F69 0F98	J50A G50A	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX MDX	L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180 3A135190 3A135200 3A135200 3A135200 3A135220 3A135220
0605 0607 0608 0609 060B 060C 060E 060F 0610 0611	00000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400	0F98 0F69	J50A	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX MDX BSI	L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z M50B K50B F000	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO  ACC DISTROYED AFTER BSC	3A135120 3A135130 3A135140 3A135150 3A135160 3A135170 3A135180 3A135190 3A135200 3A135210 3A135220 3A135230 3A135230 3A135230
0605 0607 0608 0609 060B 060C 060E 0610 0611 0612 0613	000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170	0F98 0F69 0F98	J50A G50A H508	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX MDX BSI DC	L L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO MITH /BOO1 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID	3A135120 3A135130 3A135140 3A135150 3A135170 3A135170 3A135180 3A135190 3A135200 3A135210 3A135220 3A135220 3A135230 3A135230 3A135250 3A135250
0605 0607 0608 0609 060B 060C 060E 0610 0611 0612 0613 0615	0000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400	0F98 0F69 0F98	J50A G50A	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX MDX BSI DC	L L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR	3A135120 3A135130 3A135140 3A135160 3A135170 3A135180 3A135190 3A135200 3A135220 3A135220 3A135220 3A135220 3A135220 3A135240 3A135250 3A135250 3A135270
0605 0607 0608 0609 060B 060C 060E 0610 0611 0612 0613	0000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400	0F98 0F69 0F98	J50A G50A H50B K50B	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX MDX BSI MDX BSI MDX BSI MDX	L L L	/30AF F00E A50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO MITH /BOO1 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID	3A135120 3A135130 3A135140 3A135160 3A135170 3A135180 3A135190 3A135210 3A135220 3A135220 3A135220 3A135220 3A135230 3A135250 3A135250 3A135250
0605 0607 0608 0609 060B 060C 060C 0610 0611 0612 0613 0615 0616	00000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400 7000	0F98 0F69 0F69 0F69	J50A G50A H508 K508	DC BSI MDX MDX BSI DC BSI MDX EOR BSC MDX MDX BSI DC MDX MDX	L L L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE	3A135120 3A135130 3A135140 3A135160 3A135160 3A135170 3A135180 3A135200 3A135200 3A135200 3A135220 3A135220 3A135250 3A135260 3A135260 3A135260 3A135260 3A135270 3A135280 3A135290
0605 0607 0608 0609 0608 060C 060F 0610 0611 0612 0613 0615 0616	00000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400 7000	0F98 0F69 0F98 0F69 0FC4	J50A  G50A  H50B  K50B	DC BSI MDX MDX BSI BSI MDX EOR BSC MDX BSI DC BSI MDX DC BSI MDX DC BSI MDX	L L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO MITH /BOO1 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE	3A135120 3A135130 3A135140 3A135160 3A135170 3A135180 3A135190 3A135210 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135280 3A135270 3A135280 3A135290 3A135290
0605 0607 0608 0609 060B 060C 060C 0610 0611 0612 0613 0615 0616	00000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400 7000	0F98 0F69 0F98 0F69 0FC4	J50A  G50A  H50B  K50B	DC BSI MDX MDX BSI BSI MDX EOR BSC MDX BSI DC BSI MDX DC BSI MDX DC BSI MDX	L L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO MITH /BOO1 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE	3A135120 3A135130 3A135140 3A135160 3A135170 3A135180 3A135190 3A135210 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135280 3A135270 3A135280 3A135290 3A135290
0605 0607 0608 0609 060B 060C 060E 060F 0611 0613 0615 0616 0618	00000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400 7000	0F98 0F69 0F98 0F69 0FC4	J50A  G50A  H50B  K50B  ****** *LA{	DC BSI MDX MDX BSI BSI MDX EOR BSC MDX BSI DC BSI MDX PC BSI MDX DC BSI MDX DC BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	L L L L FT	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE	3A135120 3A135130 3A135140 3A135160 3A135170 3A135180 3A135190 3A13520 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135280 3A135270 3A135280 3A135280 3A135290 3A135290 3A135320
0605 0607 0608 0609 060B 060C 060E 060F 0611 0613 0615 0616 0618	00000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 7000 *****************************	OF98 OF69 OFC4 A DR RUCTION	J50A  G50A  H50B  K50B  ****** *LA{	DC BSI MDX MDX BSI DC BSI MDX ESC MDX BSI DC BSI MDX BSI DC MDX BSI DC MDX BSI MDX BSI MDX BSI MDX BSI MDX MDX BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	L L L	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C ************************************	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO MITH /BOO1 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE ************************************	3A135120 3A135130 3A135140 3A135160 3A135170 3A135180 3A135190 3A13520 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135280 3A135270 3A135280 3A135280 3A135290 3A135290 3A135320
0605 0607 0608 0609 0608 060C 060E 060F 0610 0611 0612 0613 0615 0616 0618	000000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400 7000	OF98 OF69 OFC4 A DR RUCTION	J50A  G50A  H50B  K50B  ***********************************	DC BSI MDX MDX BSI DC BSI MDX ESC MDX BSI DC BSI MDX BSI DC MDX BSI DC MDX BSI MDX BSI MDX BSI MDX BSI MDX MDX BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	L L L FT	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C ************************************	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE  ***********************************	3A135120 3A135130 3A135140 3A135160 3A135160 3A135170 3A135180 3A135210 3A135220 3A135220 3A135220 3A135220 3A135220 3A135220 3A135240 3A135260 3A135260 3A135260 3A135270 3A135280 3A135290 3A135300 3A135300 3A135300
0605 0607 0608 0609 0608 060C 060E 0611 0612 0613 0615 0616 0618 ******	000000000000000	30AF 4400 70F4 7006 4400 30B0 4400 70ED F048 4820 7001 7003 4400 3170 4400 7000 ***************************	OF98 OF69 OFC4 A DR RUCTION	J50A  G50A  H50B  K50B  ***********************************	DC BSI MDX MDX BSI DC BSI MDX ESC MDX BSI DC MDX BSI DC MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L L FT	/30AF F00E A50A G50A F000 /30B0 F00E A50A N500 Z H50B K50B F000 /3170 F005 A50C ************************************	ERR ID CK LOCK ON ERROR LOOP  BSC SKPD-SHOULD BRNCH ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8001 SK ON ZERO  ACC DISTROYED AFTER BSC ERR ID CK LOCK ON ERROR EXIT TO NEXT ROUTINE ************************************	3A135120 3A135130 3A135140 3A135160 3A135160 3A135170 3A135180 3A135200 3A135200 3A135220 3A135220 3A135220 3A135220 3A135220 3A135280 3A135280 3A135280 3A135290 3A135300 3A135300 3A135310 3A135310 3A135310

061E 0 7008		MDX		J50C		3A135380
		MDX		K50C	DEC SELL TUBL	3A135390
			L	F000	BSC FELL THRU	3A135400 3A135410
0622 0 30B1		DC		/30B1	ERR ID CK LOCK ON ERROR	3A135420
0623 0 4400 OFC4			L	F005 A50C	LOOP	3A135430
0625 0 70F3 0626 0 7006		MDX MDX		A50E	2007	3A135440
0627 0 4400 0F69	J50C		L	F000	BSC SKPD-SHOULD BRNC	3A135450
0629 0 3082	0,00	DC.	_	/30B2	ERR ID	3A135460
	K50C		L	F005	CK LOCK ON ERROR	3A135470
062C 0 70EC		MDX		A50C	LOOP	3A135480
062D 0 2000	A50E	LDS		0	SET C AND OF OFF	3A135490
	*****		***		*******	3A135500
062E 0 2003		LDS		3	SET C AND OF DN LD /8001	3A135510 3A135520
062F 0 CO28 0630 0 4C3F 0634		LD BSC	L	N500	- BR ON NOT PLUS, NOT EVEN,	
0630 U 4C3F 0634	*	<b>B3</b> C	_	6702462002	*OF, CARRY, NOT ZERO OR	3A135540
	*				*NOT MINUS	3A135550
0632 0 700B		MDX		H50E		3A135560
0633 0 7007		MDX		J50E		3A135570
0634 0 4400 OF69	G50E	BSI	L	F000	BSC BRNCHED-SHOULDNT	3A135580
0636 O 30B3		DC		/30B3	ERR ID	3A135590
0637 0 4400 OFC4			L	F005 A50E	CK LOCK ON ERROR	3A135600 3A135610
0639 0 70F3		MDX MDX		8500		3A135620
063A 0 7006 063B 0 4400 0F69	J50E	-	L	F000	BSC SKPD-SHOULDNT	3A135630
063D 0 30B4	0,00	DC.	_	/30B4	ERR ID	3A135640
063E 0 4400 OFC4	H50E		L	F005	CK LOCK ON ERROR	3A135650
0640 0 70EC		MDX		A50E	LOOP	3A135660
			***		*****	3A135670
0641 0 2003	B500	LDS		3	SET C AND OF ON	3A135680 3A135690
0642 0 CO18		LD		N503	LD /0001 SK DN PLUS	3A135700
0643 0 4808 0644 0 700C		BSC MDX		& \$501	SK DR FEUS	3A135710
0645 0 2817		STS		N505	SET /0003 IN N505	3A135720
0646 0 CO16		LD		N505	LD /0003	3A135730
0646 0 C016 0647 0 F016						3A135740
		LD E OR BSC	L	N505 N506 S503,&-	LD /0003 ZERO WITH /0003 BRANCH ON ZERO	3A135740 3A135750
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69		LD E OR BSC BSI	L	N505 N506 S503+&- F000	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW	3A135740 3A135750 3A135760
0647 0 F016 0648 0 4C18 0654 0648 0 4400 0F69 064C 0 3085		LD EOR BSC BSI DC	L	N505 N506 S503+&- F000 /3085	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR 1D	3A135740 3A135750 3A135760 3A135770
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4		LD EOR BSC BSI DC BSI		N505 N506 S503,&- F000 /3085 F005	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR 1D CK LOCK ON ERROR	3A135740 3A135750 3A135760 3A135770 3A135780
0647 0 F016 0648 0 4C18 0654 0648 0 4400 0F69 064C 0 3085 064D 0 4400 0FC4 064F 0 70F1		LD EOR BSC BSI DC BSI MDX	L	N505 N506 S503,&- F000 /3085 F005 B500	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR 1D CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135760 3A135770 3A135780 3A135790
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F	\$501	LD EOR BSC BSI DC BSI MDX MDX	L	N505 N506 S503,&- F000 /30B5 F005 B500 A540	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A135740 3A135750 3A135760 3A135770 3A135780
0647 0 F016 0648 0 4C18 0654 0648 0 4400 0F69 064C 0 3085 064D 0 4400 0FC4 064F 0 70F1	\$501	LD EOR BSC BSI DC BSI MDX	L	N505 N506 S503,&- F000 /3085 F005 B500	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR 1D CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135760 3A135770 3A135780 3A135790 3A135800
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69	\$501 \$503	LD EOR BSC BSI DC BSI MDX MDX BSI	L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F000	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP	3A135740 3A135750 3A135760 3A135770 3A135780 3A135790 3A135800 3A135810
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 3085 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 3086 0654 0 4400 0FC4		ED EOR BSC BSI DC BSI MDX MDX BSI DC BSI MDX	L L	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135760 3A135770 3A135780 3A135790 3A135800 3A135820 3A135820 3A135840
0647 0 F016 0648 0 4C18 0654 0648 0 4400 0F69 064C 0 3085 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 3086 0654 0 4400 0FC4 0656 0 70EA	\$503	ED EOR BSC BSI DC BSI MDX MDX BSI DC BSI MDX MDX MDX	L L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F000 /3086 F005 B500 A540	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR	3A135740 3A135750 3A135770 3A135770 3A135780 3A135790 3A135800 3A135810 3A135820 3A135830 3A135850 3A135850
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008	\$503 N500	LD EOR BSC BSI DC BSI MDX MDX BSI DC BSI MDX MDX DC	L L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F000 /3086 F005 B500 A540 /8001	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP	3A135740 3A135750 3A1357760 3A1357770 3A135780 3A135780 3A135810 3A135810 3A135820 3A135830 3A135840 3A135850 3A135850
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000	S503 N500 N501	LD EOR BSC BSI DC 8SI MDX MDX BSI DC BSI MDX MDX DC DC	L L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F000 /3086 F005 B500 A540 /8001 /0000	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135770 3A135770 3A135780 3A135790 3A135810 3A135810 3A135820 3A135830 3A135850 3A135850 3A135850 3A135870
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000	S503 N500 N501 N502	LD E OR BSC BSI DC BSI MDX MDX BSI DC BSI MDX MDX DC DC	L L	N505 N506 S503,&- F000 F000 B500 A540 F000 /3086 F005 B500 A540 /8001 /8000	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135760 3A135770 3A135780 3A135800 3A135810 3A135820 3A135830 3A135840 3A135850 3A135850 3A135860 3A135870 3A135880
0647 0 F016 0648 0 4C18 0654 0648 0 4400 0F69 064C 0 3085 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 3086 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 0658 0 8000	N500 N500 N501 N502 N503	LD EOR BSC BSI DC BSI MDX MDX BSI MDX MDX DC DC DC	L L	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /8000	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135770 3A135770 3A135780 3A135790 3A135810 3A135810 3A135820 3A135830 3A135850 3A135850 3A135850 3A135870
0647 0 F016 0648 0 4C18 0654 064A 0 4400 0F69 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000	S503 N500 N501 N502	LD EOR BSC BSI DC BSI MDX MDX BSI DC BSI MDX DC DC DC DC	L L	N505 N506 S503,&- F000 F000 B500 A540 F000 /3086 F005 B500 A540 /8001 /8000	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP	3A135740 3A135750 3A135770 3A135770 3A135780 3A135780 3A135800 3A135810 3A135820 3A135840 3A135850 3A135850 3A135850 3A135860 3A135860 3A135890
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 8001	S503 N500 N501 N502 N503 N504	LD EOR BSC BSI DC BSI MDX MDX BSI DC BSI MDX DC DC DC DC	L L L	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /8000	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A135740 3A135750 3A1357760 3A135770 3A135780 3A135810 3A135810 3A135820 3A135830 3A135840 3A135850 3A135870 3A135870 3A135870 3A135870 3A135890 3A135910 3A135910
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 0646 0 3085 0640 0 4400 0FC4 0650 0 700F 0651 0 4400 0F69 0653 0 3086 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065D 0 0000	S503 N500 N501 N502 N503 N504 N505	LD E OR BSC BSI DC BSI MDX BSI DC BSI MDX MDX DC DC DC DC	L L L	N505 N506 S503,&= F000 /3085 F005 B500 A540 F005 B500 A540 /8001 /0000 /8000 /0001 /0004	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A135740 3A135750 3A135770 3A135770 3A135780 3A135800 3A135810 3A135820 3A135820 3A135850 3A135850 3A135870 3A135870 3A135870 3A135890 3A135930 3A135930
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 0646 0 3085 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0FC4 0656 0 70EA 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065E 0 0000	N500 N501 N502 N503 N504 N505 N506 N542	LD E OR BSC BSI DC BSI MDX BSI DC BSI MDX MDX DC DC DC DC	L L L	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /0001 /0004 *-* /0003 /0002	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A135740 3A135750 3A135770 3A135780 3A135780 3A135800 3A135800 3A135820 3A135840 3A135850 3A135850 3A135850 3A135860 3A135860 3A135890 3A135900 3A135900 3A135920 3A135920 3A135930 3A135940
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 0646 0 3085 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0FC4 0656 0 70EA 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065E 0 0000	S503 N500 N501 N502 N503 N504 N505 N506 N542 *	LD E OR BSC BSI DC BSI MDX BSI DC BSI MDX MDX DC DC DC DC	L L L	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /0001 /0004 *-* /0003 /0002	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A135740 3A135750 3A135770 3A135780 3A135780 3A135800 3A135810 3A135820 3A135830 3A135850 3A135850 3A135860 3A135860 3A135870 3A135890 3A135990 3A135910 3A135920 3A135930 3A135930 3A135930
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 0646 0 3085 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0FC4 0656 0 70EA 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065E 0 0000	S503 N500 N501 N502 N503 N504 N505 N506 N542 *	LD EOR BSC BSI DC BSI MDX MDX BSI DC BSI MDX DC DC DC DC	L L L	N505 N506 S503,&= F000 /30B5 F005 B500 A540 F005 B500 A540 /8001 /0000 /8000 /0001 /0004 *-* /0003 /0002	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE STORAGE  OF BSI OPERATION	3A135740 3A135750 3A135770 3A135780 3A135780 3A135800 3A135810 3A135810 3A135820 3A135850 3A135850 3A135860 3A135860 3A135870 3A135890 3A135910 3A135920 3A135920 3A135930 3A135940 3A135950 3A135950
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 0646 0 3085 0640 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0FC4 0656 0 70EA 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065C 0 0004 065F 0 0003	S503 N500 N501 N502 N503 N504 N505 N506 N542 *	LD E OR BSI DC BSI MDX MDX BSI DC BSI MDX DC DC DC DC	L L L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F005 B500 A540 /8001 /0000 /8000 /0001 /0004 *-* /0003 /0002	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A135740 3A135750 3A135770 3A135780 3A135780 3A135780 3A135810 3A135810 3A135820 3A135840 3A135850 3A135870 3A135870 3A135870 3A135970 3A135910 3A135920 3A135930 3A135930 3A135930 3A135930 3A135930 3A135930 3A135970
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 8001 065C 0 0004 065D 0 0000 065F 0 0003 065F 0 0002	N500 N501 N502 N503 N504 N505 N506 N542 *	LD EOR BSCI DC BSI MDX MDX BSI DC BSI MDX MDX DC DC DC DC	L L E	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /8000 /0001 /0004 *-* /0003 /0002	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  STORAGE  OF BSI OPERATION	3A135740 3A135750 3A135750 3A135780 3A135780 3A135800 3A135810 3A135820 3A135840 3A135850 3A135850 3A135860 3A135870 3A135890 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0FC4 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 8001 065C 0 0004 065D 0 0000 065F 0 0003 065F 0 0002	S503 N500 N501 N502 N503 N504 N505 N506 N542 * * ******	LD EOR BSCI DC BSI MDX MDX BSI DC DC DC DC DC DC DC	L L L E	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /0001 /0004 *-* /0003 /0002 TEST	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  STORAGE  OF BSI OPERATION ************************************	3A135740 3A135750 3A135750 3A135780 3A135780 3A135800 3A135810 3A135820 3A135840 3A135850 3A135850 3A135860 3A135890 3A135990
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0FC4 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 8001 065C 0 0004 065D 0 0000 065F 0 0003 065F 0 0002	S503 N500 N501 N502 N503 N504 N505 N506 N542 * * ******	LD EOR BSCI DC BSI MDX MDX BSI DC DC DC DC DC DC DC	L L L E	N505 N506 S503,&- F000 /30B5 F005 B500 A540 F000 /30B6 F005 B500 A540 /8001 /0000 /0001 /0004 *-* /0003 /0002 TEST	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  STORAGE  STORAGE  OF BSI OPERATION ************************************	3A135740 3A135750 3A135750 3A135760 3A135780 3A135780 3A135800 3A135810 3A135820 3A135850 3A135850 3A135850 3A135860 3A135890 3A135990 3A135910 3A135920 3A135920 3A135970 3A135960 3A135970 3A135970 3A135990 3A135970 3A135990 3A135990 3A135990
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 0650 0 70F1 0650 0 70F 0651 0 4400 0FC9 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 700B 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065D 0 0000 065F 0 0003 065F 0 0002	S503 N500 N501 N502 N503 N504 N505 N506 N542 * * ******	LD EOR BSCI DC BSI MDX MDX BSI DC BSI MDX DC	L L L E	N505 N506 S503,&- F000 /3085 F005 B500 A540 F005 B500 A540 /8001 /0000 /8000 /0001 /0004 *-* /0003 /0002 TEST	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  STORAGE  OF BSI OPERATION  ***********************************	3A135740 3A135750 3A135750 3A135760 3A135780 3A135780 3A135810 3A135810 3A135820 3A135850 3A135850 3A135860 3A135870 3A135890 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135990 3A135980
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 064F 0 70F1 0650 0 700F 0651 0 4400 0F69 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 7008 0658 0 8001 0659 0 0000 0658 0 8001 0659 0 0000 0658 0 0001 065C 0 0004 065D 0 0000 065F 0 0003 065F 0 0002	N500 N501 N502 N503 N504 N505 N506 N542 * * ******	LD E OR BSCI DC BSI MDX MDX BSI DC BSI MDX MDX DC	L L L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F005 B500 A540 /8001 /0000 /8000 /0001 /0004 *-* /0003 /0002 TEST	LD /0003 ZERO MITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  STORAGE  OF BSI OPERATION ************************************	3A135740 3A135750 3A135760 3A135780 3A135780 3A135810 3A135810 3A135820 3A135850 3A135850 3A135870 3A135870 3A135870 3A135890 3A135990 3A135910 3A135930 3A135930 3A135940 3A135930 3A135940 3A135960 3A135970 3A135980
0647 0 F016 0648 0 4C18 0654 0648 0 4C18 0654 064C 0 30B5 064D 0 4400 0FC4 0650 0 70F1 0650 0 70F 0651 0 4400 0FC9 0653 0 30B6 0654 0 4400 0FC4 0656 0 70EA 0657 0 700B 0658 0 8001 0659 0 0000 065A 0 8000 065B 0 0001 065C 0 0004 065D 0 0000 065F 0 0003 065F 0 0002	N500 N501 N502 N503 N504 N505 N506 N542 * * ******	LD EOR BSCI DC BSI MDX MDX BSI DC BSI MDX DC	L L L	N505 N506 S503,&- F000 /3085 F005 B500 A540 F005 B500 A540 /8001 /0000 /8000 /0001 /0004 *-* /0003 /0002 TEST	LD /0003 ZERO WITH /0003 BRANCH ON ZERO BSC & CLEARED OVFLW ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSC FAILED TO SKP ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  STORAGE  OF BSI OPERATION  ***********************************	3A135740 3A135750 3A135750 3A135780 3A135780 3A135800 3A135810 3A135820 3A135840 3A135850 3A135850 3A135850 3A135890 3A135890 3A135990 3A136000 3A136000 3A136000 3A136000

0665 0 7							
	007		MDX		J540		3A136060
0666 0 4	400 OF69	H540	BSI	L	F000	BSI FELL THRU	3A136070
0668 0 3	087		DC		/30B7	ERR ID	3A136080
	400 OF98		BSI	L	FOOE	CK LOCK ON ERROR	3A136090
066B 0_7			MDX		A540	LOOP	3A136100
066C 0 7			MDX		A544	EXIT TO NEXT ROUTINE	3A136110
	400 OF69	J540		L	F000	BSI SKPD-SHOULD BRNCH	3A136120
066F 0 3			DC		/3088	ERR ID	3A136130
	400 OF98			L	FOOE	CK LUCK ON ERROR	3A136140
0672 0 7			MDX		A540	LOOP	3A136150
0673 0 7		G540	MDX DC		6540&1 /0000	SK TO WORD AFTER G540	3A136160
0674 0 0 0675 0 2		6540	STS		70000 N505	STORE /0002 IN N505	3A136170 3A136180
0676 0 0			LD		N505	LD /0002	3A136190
	400 065F		EDR	•		ZERO WITH /0002	3A136200
	C18 067E			Ĺ		BRANCH ON ZERO	3A136210
	400 OF69			ī		BSI NOT CLEAR OVERFLOW	3A136220
067D 0 3			DC	_	/3089	ERR ID	3A136230
	400 OFC4	G542	BSI	L		CK LUCK ON ERROR	3A136240
0680 0	70 DF		MDX		A540	LOOP	3A136250
		****	*****	***	********	******	3A136260
0681 0 0	400 065F	A544	LD	L	N542	LD /0002	3A136270
0683 0 4	430 0695		BSI	L	G544, Z-	SK ON NOT ZERO OR	3A136280
0685 0			MDX		H544	* NOT MINUS	3A136290
0686 0			MDX		J544		3A136300
	4400 OF69	H544		L		BSI DID NOT BRANCH	3A136310
0689 0			DC		/30BA	ERR ID	3A136320
	4400 OFC4		BSI	L		CK LOCK ON ERROR	3A136330
0680 0			MDX		A544	LOOP	3A136340
068D 0			MDX		A546	EXIT TO NEXT ROUTINE	3A136350
	4400 OF69	J544		L		BSI SKPD-SHOULD BRNC	3A136360
0690 0			DC BS1		/30BB F005	ERR ID CK LOCK ON ERROR	3A136370 3A136380
0693 0	4400 OFC4		MDX	L	A544	LOOP	3A136390
0694 0			MDX		A546	EXIT TO NEXT ROUTINE	3A136400
0695 0 (		G544			/0000	EXIT TO HEAT ROOTINE	3A136410
0097 0	3000			***		*******	3A136420
0696 0	0002	A546			N501		3A136430
-	4420 069B		BSI	L	6546,2	BR WHEN NOT ZERO	3A136440
0699 0			MDX		J546		3A136450
					NE 4 4		
069A 0	7008		MDX		H546		3A136460
		G546	_		/0000		
069A 0 069B 0		G546	_	L	/0000	BSI BRNCHD-SHOULD NO	3A136460
069A 0 069B 0	0000 4400 OF69	G546	DC	L	/0000	ERR ID	3A136460 3A136470 3A136480 3A136490
069A 0 0 069B 0 069C 0 069E 0 069F 0	0000 4400 OF69 30BC 4400 OFC4	G546	DC BSI DC BSI	L L	/0000 F000 /30BC F005	ERR ID CK LOCK ON ERROR	3A136460 3A136470 3A136480 3A136490 3A136500
069A 0 0 069B 0 069C 0 069C 0 069F 0 069F 0 06A1 0	0000 4400 0F69 30BC 4400 0FC4 70F4	G546	DC BSI DC BSI MDX		/0000 F000 /30BC F005 A546	ERR ID CK LOCK ON ERROR LOOP	3A136460 3A136470 3A136480 3A136490 3A136500 3A136510
069A 0 069B 0 069C 0 069E 0 069F 0 06Al 0	0000 6400 0F69 30BC 6400 0FC4 70F4 7006		DC BSI DC BSI MDX MDX	L	/0000 F000 /30BC F005 A546 A548	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A136460 3A136470 3A136480 3A136490 3A136500 3A136510 3A136520
069A 0 069B 0 069C 0 069E 0 069F 0 06A1 0 06A2 0	0000 4400 0F69 30BC 4400 0FC4 70F4 7006 4400 0F69	G546 H546	DC BSI DC BSI MDX MDX BSI	L	/0000 F000 /30BC F005 A546 A548 F000	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530
069A 0 069B 0 069C 0 069E 0 069F 0 06AF 0 06A2 0 06A3 0	0000 6400 0F69 30BC 6400 0FC4 70F4 7006 6400 0F69 30BC	H546	DC BSI DC BSI MDX MDX BSI DC	L	/0000 F000 /30BC F005 A546 A548 F000 /30BD	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID	3A136460 3A136470 3A136480 3A136500 3A136510 3A136510 3A136520 3A136530 3A136540
069A 0 069B 0 069C 0 069E 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0	0000 6400 0F69 3080 4400 0FC4 7006 6400 0F69 3080 6400 0FC4		DC BSI DC BSI MDX MDX BSI DC BSI	L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136520 3A136530 3A136550
069A 0 069B 0 069C 0 069E 0 069F 0 06AF 0 06A2 0 06A3 0	0000 6400 0F69 3080 4400 0FC4 7006 6400 0F69 3080 6400 0FC4	H546 J546	DC BSI DC BSI MDX MDX BSI DC BSI MDX	L L L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136530 3A136550 3A136550
069A 0 069B 0 069C 0 069E 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0	0000 4400 0F69 308C 4400 0FC4 7066 4400 0F69 308C 4400 0F69 308C	H546 J546	DC BSI DC BSI MDX MDX BSI DC BSI MDX	L L L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136540 3A136550 3A136560 3A136570
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0	0000 4400 0F69 308C 4400 0FC4 7066 4400 0F69 308C 4400 0FC4 70ED	H546 J546 *****	DC BSI DC BSI MDX MDX BSI DC BSI MDX	L L L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136540 3A136550 3A136560 3A136570 3A136570
069A 0 069B 0 069C 0 069E 0 069E 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A8 0	0000 6400 0F69 30BC 6400 0FC4 70F6 6400 0F69 30BP 6400 0FC4 70ED	H546 J546 ***** *L4-	DC BSI DC BSI MDX MDX BSI DC BSI MDX	L L L ***	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136480 3A136500 3A136510 3A136510 3A136530 3A136540 3A136550 3A136560 3A136560 3A136580 3A136580 3A136590
069A 0 069B 0 069C 0 069F 0 068F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A6 0	0000 6400 0F69 30BC 6400 0FC4 7066 6400 0F69 30BC 6400 0FC4 70ED ************************************	H546 J546 ***** ******** *LA- I ON *BEL	DC BSI DC BSI MDX MDX BSI DC BSI MDX BSI DC BSI MDX  ##################################	L L L ***	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136540 3A136560 3A136560 3A136560 3A136580 3A136590 3A136600
069A 0 069B 0 069C 0 069F 0 068F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A6 0 06A8 0	0000 6400 0F69 308C 6400 0FC4 70F6 6400 0F69 308C 6400 0F69 308C 6400 0FC4 70ED	H546 J546 ***** *LA- I ON *BEL	DC BSI DC BSI MDX BSI DC BSI MDX ******	L L L ***	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136540 3A136560 3A136560 3A136560 3A136580 3A136590 3A136600
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A6 0 06A6 0	0000 4400 OF69 30BC 4400 OFC4 7006 4400 OF69 30BC 4400 OFC4 70ED ************************************	H546 J546 ***** ******************************	DC BSI DC BSI MDX BSI DC BSI MDX SSI DC ASI MDX LEE**** LD	L L +**: FT	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136530 3A136550 3A136550 3A136550 3A136570 3A136580 3A136590 3A136600 3A136610
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A6 0 06A6 0	0000 4400 OF69 30BC 4400 OFC4 7006 4400 OF69 30BC 4400 OFC4 70ED ************************************	H546 J546 ***** ******************************	DC BSI DC BSI MDX BSI DC BSI MDX SSI DC ASI MDX LEE**** LD	L L +**: FT	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136550 3A136550 3A136550 3A136570 3A136570 3A136580 3A136610 3A136610 3A136620
069A 0 069B 0 069C 0 069F 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A8 0	0000 4400 OF69 30BC 4400 OFC4 7006 4400 OF69 30BC 4400 OFC4 70ED ************************************	H546 J546 ***** ******************************	DC BSI DC BSI MDX MDX BSI DC BSI MDX BSI DC BSI DC BSI BSI	L L L FT FT FT L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136520 3A136550 3A136560 3A136560 3A136560 3A136560 3A136600 3A136600 3A136600 3A136620 3A136630
069A 0 069B 0 069C 0 069F 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A8 0	0000 4400 0F69 308C 4400 0FC4 7064 4400 0F69 308C 4400 0F64 70ED ************************************	H546 J546 ***** ******************************	DC BSI DC BSI MDX MDX BSI DC BSI MDX  **********************************	L L L FT FT FT L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136530 3A136550 3A136560 3A136570 3A136580 3A136590 3A136600 3A136600 3A136600 3A136600 3A136600 3A136600
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0	0000 4400 0F69 308C 4400 0FC4 7064 4400 0F69 308C 4400 0F64 70ED ************************************	H546 J546 ***** ******************************	DC BSI DC BSI MDX MDX BSI DC BSI DC BSI OPER ATION BSI MDX BSI MDX BSI MDX BSI MDX BSI MDX	L L L *** FT*	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136530 3A136550 3A136550 3A136570 3A136570 3A136570 3A136600 3A136610 3A136640 3A136650 3A136650 3A136650 3A136660 3A136670
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0	0000 4400 OF69 30BC 4400 OFC4 7006 4400 OF69 30BC 4400 OFC4 70ED ************************************	H546 J546 ***** ******************************	DC BSI DC BSI MDX MDX BSI DC BSI MDX  ********  ********  *******  *******  ****	L L L *** FT*	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136530 3A136550 3A136550 3A136570 3A136570 3A136610 3A136610 3A136610 3A136640 3A136640 3A136640 3A136640 3A136670 3A136670 3A136670 3A136680
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0	0000 4400 OF69 30BC 4400 OFC4 7006 4400 OF69 30BC 4400 OFC4 70ED ************************************	H546 J546 ***** *LA- I ON *BEL ******** A548	DC BSI DC BSI MDX MDX BSI DC BSI MDX  *******  ******  ******  ******  *****	L L L *** FT*	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136520 3A136550 3A136560 3A136560 3A136560 3A136600 3A136600 3A136600 3A136600 3A136670 3A136650 3A136650 3A136670 3A136670 3A136670 3A136670 3A136680 3A136690
069A 0 069B 0 069C 0 069F 0 069F 0 06A1 0 06A2 0 06A3 0 06A5 0 06A6 0 06A8 0 06A6 0 06A8 0 06AC 0 06AC 0 06AC 0 06AC 0 06AC 0	0000 4400 0F69 30BC 4400 0FC4 70F4 7006 4400 0F69 30BP 4400 0FC4 70ED ************************************	H546 J546 ***** ******************************	DC BSI DD BSI DD BSI DD BSI DC	L L L L L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136480 3A136500 3A136510 3A136520 3A136520 3A136550 3A136550 3A136560 3A136570 3A136560 3A136600 3A136600 3A136600 3A136630 3A136640 3A136670 3A136670 3A136670 3A136670 3A136680 3A136690 3A136670
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069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A5 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06AC 0 06	0000 4400 OF69 30BC 4400 OFC4 7006 4400 OF69 30BC 4400 OFC4 70ED ************************************	H546 J546 ***** *LA- ION *BEL ******** A548	DC BSI DC BSI MDX BSI DC BSI MDX ******  *****  *****  *****  DPER ATION BSI MDX BSI MDX BSI MDX BSI MDX BSI DC BSI MDX DC BSI MDX DC BSI MDX	L L L L L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136530 3A136550 3A136550 3A136570 3A136570 3A136600 3A136610 3A136610 3A136600 3A136670 3A136670 3A136670 3A136670 3A136670 3A136710 3A136710
069A 0 069B 0 069C 0 069F 0 06A1 0 06A2 0 06A5 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06A6 0 06AC 0 06	0000 4400 0F69 308C 4400 0FC4 70F4 7006 4400 0F69 308C 4400 0FC4 70ED ************************************	H546 J546 ***** *LA- ION *BEL ******** A548	DC BSI DC BSI MDX BSI DC BSI MDX ******  *****  *****  *****  DPER ATION BSI MDX BSI MDX BSI MDX BSI MDX BSI DC BSI MDX DC BSI MDX DC BSI MDX	L L L L L	/0000 F000 /30BC F005 A546 A548 F000 /30BD F005 A546 ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE BSI SKPD-SHOULD NOT ERR ID CK LOCK ON ERROR LOOP **********************************	3A136460 3A136470 3A136490 3A136500 3A136510 3A136520 3A136530 3A136550 3A136550 3A136550 3A136570 3A136600 3A136610 3A136600 3A136600 3A136600 3A136600 3A136670 3A136670 3A136670 3A136670 3A136670 3A136670 3A136700 3A136710

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06BA 0 70EE	****	MDX	***	A548	LOOP	3A136740 3A136750
O6BB O COA3	A54A			N542		3A136760
06BC 0 440B 06C6		BSI	L	G54A,&	BR WHEN NOT PLUS	3A136770
06BE 0 700B		MDX		H54A		3A136780
06BF 0 4400 0F69		BSI	L	F000	BSI SKPD ON COND TRUE	3A136790
06C1 0 30C0 06C2 0 4400 0FC4		DC BS I	L	/30C0 F005	ERR ID CK LOCK ON ERKOR	3A136800 3A136810
06C4 0 70F6		MDX	-	A54A	LOOP	3A136820
0605 0 7007		MDX		A54C	EXIT TO NEXT ROUTINE	3A136830
0606 0 0000	G54A			/0000		3A136840
05C7 0 4400 0F69		BSI	L		BSI BRNCHD-SHOULD NOT	3A136850
06C9 0 30C1 06CA 0 4400 0FC4	H54A	DC BS I	L	/30C1 F005	ERR ID CK LOCK ON ERROR -	3A136860 3A136870
06CC 0 70EE	пэна	MDX	_	A54A	LOOP	3A136880
	****		***		******	3A136890
06CD 0 CO91	A54C	LD		N542		3A136900
06CE 0 4404 06D8		BSI	L	G54C+E	BR WHEN NOT EVEN	3A136910
06D0 0 700B		MDX		H54C	BSI SKPD ON COND TRUE	3A136920
06D1 0 4400 0F69 06D3 0 30C2		BS I DC	L	F000 /30C2	ERR ID	3A136930 3A136940
06D4 0 4400 0FC4		BSI	L	F005	CK LOCK ON ERROR	3A136950
06D6 0 70F6		MDX	_	A54C	LOOP	3A136960
06D7 0 7007		MDX		A54E	EXIT TO NEXT ROUTINE	3A136970
C6D8 0 0000	G54C	DC		/0000	DET BONCHO CHOM D NOT	3A136980
06D9 0 4400 0F69 06DB 0 30C3		BS I DC	L	F000 /30C3	BSI BRNCHD-SHOULD NOT ERR ID	3A136990 3A137000
06DC 0 4400 OFC4	H54C	BSI	L	F005	CK LOCK ON ERROR	3A137010
06DE 0 70EE		MDX	-	A54C	LOOP	3A137020
	****	****	***	*********	*******	3A137030
06DF 0 2000	A54E			0	SET C AND OF OFF	3A137040
06E0 0 4402 06EA 06E2 0 700B		BS I MDX	L.	654E+C H54E	BR IF CARRY IS ON	3A137050 3A137060
06E3 0 4400 0F69		BSI	L	F000	BSI SKPD ON COND TRUE	3A137070
06E5 0 30C4		DC	_	/3004	ERR ID	3A137080
06E6 0 4400 OFC4		BSI	L		CK LOCK ON ERROR	3A137090
06E8 0 70F6		MDX		A54E	LOOP	3A137100
06E9 0 7007	C E 4 E	MDX		A54F	EXIT TO NEXT ROUTINE	3A137110
06EA 0 0000 06EB 0 4400 0F69	G54E	DC BS I	L	/0000 F000	BSI BRNCHD-SHOULD NOT	3A137120 3A137130
06ED 0 30C5		DC	-	/30C5	ERR ID -	3A137140
06EE 0 4400 OFC4	H54E	BSI	L	F005	CK LOCK ON ERROR	3A137150
06F0 0 70EE		MDX		A54E	LOOP	3A137160
0.451 0 2000			***		******	3A137170
06F1 0 2000 06F2 0 4401 06FD	A54F	LDS BSI	L	0 G54F•0	SET C AND OF OFF BR ON OVERFLOW	3A137180 3A137190
06F4 0 700C		MDX	L	H54F	DR UN UVERFLUW	3A137200
06F5 0 4400 0F69		BSI	L	F000	BSI SKPD ON COND TRUE	3A137210
06F7 0 30C6		DC		/30C6	ERR ID	3A137220
06F8 0 30C6		DC		/30C6	ERR ID	3A137230
06F9 0 4400 OFC4 06FB 0 70F5		BSI	L	F005	CK LOCK ON ERROR	3A137240 3A137250
06FC 0 70F3		MDX		A54F A580	EXIT TO NEXT ROUTINE	3A137260
06FD 0 0000	654F	DC		/0700	EXIT TO NEXT ROOTINE	3A137270
06FE 0 4400 0F69		BSI	L		BSI BRNCHD-SHOULD NOT	3A137280
0799 0 3007		DC		/3007	ERR ID	3A137290
0701 0 4400 OFC4 0703 0 70ED	H54F	BSI	L		CK LOCK ON ERROR	3A137300
טיטט ט ועבט	*	MDX		A54F	LOOP	3A137310 3A137320
	*			TEST	OF LDD OPERATION	3A137330
	*			-20.		3A137340
					******	3A137350
			***	*******	**************	
CORE DATA OR ADDR INSTRUCTION		OPER-	ET	UDED V PUC C	REMARKS IDESEG# AT RIGHT	3A137370
	*****	****			**************************************	3A137390
0704 0 CC00 0788		LDD		N5C1	LDD A#/0000 Q#/0000	3A137400
0706 0 4C18 070B		BSC	L	G580,&-	BRANCH ON ZERD	3A137410

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0708 070A	0 4400							
070A				BSI	L	F000	LDD-A REG INCORRECT	3A13742
				DC	_	/3008	ERR ID	3A13743
	0 4400		G580	BSI	L	FOOE	CK LOCK ON ERROR	3A13744
	0 70F6			MDX		A580	LOGP	3A13745
	0 1800			RTE		16	22.415.4.24.25.2	3A13746
	0 4018			BSC	L	G582,&-	BRANCH ON ZERO	3A13747
	0 4400 0 30C9			BSI	L	F000	LDD-Q REG INCORRECT	3A13748
	0 4400		G582	DC BSI	L	/30C9 F005	ERR ID	3413749
	0 70ED		0502	WDX	L	A580	CK LOCK ON ERROR	3A13750 3A13751
0110	0 1020		****	_	***		*******	3A13752
0717	0 CB72		A584	LDD		N5C3	LD A#/FFFF G#/FFFF	3A13753
	0 F072		-501	EOR		N5C4	ZERO WITH /FFFF	3A13754
	0 4C18			BSC	L	G584.&-	BRANCH ON ZERU	3A13755
	0 4400			BSI	Ĺ	F000	LDD-A REG INCORRECT	3A13756
071D	0 30CA			DC	_	/30CA	ERR ID	3A13757
071F	0 4400	0F98	G584	BSI	L		CK LOCK ON ERROR	3A13758
	0 70F6			MDX	-	A584	LOOP	3A13759
	0 1800			RTE		16	NDW A#/FFFF Q#/0000	3A13760
	0 F068			EOR		N5C4	ZERO WITH /FFFF	3A13761
	0 4C18			BSC	L	G586, &-	BRANCH ON ZERO	3A13762
0725	0 4400	0F69		BSI	Ĺ	F000	LDD-Q REG INCORRECT	3A13763
	0 30CB			DC	•	/30CB	ERR ID	3A13764
0728	0 4400	OFC4	G586	BSI	L	F005	CK LOCK ON ERROR	3A13765
072A	0 70EC			MDX		A584	LOOP	3A13766
			****	****	***	********	******	3A13767
072B	0 C85C		A588	LDD		N5C1	LD A#/0000 Q#/0000	3A13768
072C	0 4C18	0731		BSC	L	G588,&-	BRANCH ON ZERO	3A13769
072E	0 4400	0F69		BSI	L	F000	LDD ODD-A REG FAILED	3A13770
0730	0 3000			DC		/30CC	ERR ID	3A13771
0731	0 4400	0F98	G588	BSI	L	F00E	CK LOCK ON ERROR	3A13772
0733	0 70F7	1		MDX		A588	LOOP	3A13773
0734	0 18D0	)		RTE		16	NUW A#/FFFF Q#/0000	3A13774
0735	0 4C18	073A		BSC	L	G58A,&-	BRANCH ON ZERO	3A13775
0737	0 4400	0F69		BSI	L	F000 .	LDD-ODD-Q PEG FAILED	3A13776
0739	0 30CD	) <u> </u>		DC		/30CD	ERR ID	3A13777
073A	0 4400	OFC4	G58A	BSI	L	F005	CK LOCK ON ERROR	3A13776
073C	0 70EE	:		MDX		A588	LOOP	3A13779
			*					3A13780
			*			TEST	OF STD OPERATION	3A13781
			*					3A13782
							*****	3A13783
					***	******	********	
CORE		A OR	_	OPER-				3A13789
ADDR						OPERANDS &		
	*****	*****	*****	****	***	********	****************	
			4550			115.53	LD 4#/0000 0#/0000	
073D	0 C84A		A5C0	LDD		NSC 1	LD A#/0000 Q#/0000	3A1378
073D 073E	0 C844 0 D840	)	A5C0	STD		N5C5		3A13786 3A13789
073D 073E 073F	0 C84A 0 D840 0 C040	) ;	A5C0	STD LD		N5C5 N5C5	LD A#/0000 Q#/0000	3A13786 3A13789 3A13790
073D 073E 073F 0740	0 C84# 0 D840 0 C040 0 4C18	0745	A5C0	STD LD BSC	Ļ	N5C5 N5C5 G5CO+&-	LD A#/0000 Q#/0000 Branch on Zero	3A13786 3A13789 3A13790 3A13791
073D 073E 073F 0740 0742	0 C844 0 D840 0 C040 0 4C18 0 4400	) ; } 0745 ) 0F69	A5C0	STD LD BSC BSI	L	N5C5 N5C5 G5C0+&- F000	LD A#/0000 Q#/0000 Branch on Zerd StD-EA INCORRECT	3A13786 3A13789 3A13790 3A13790
073D 073E 073F 0740 0742 0744	0 C844 0 D840 0 C040 0 4C18 0 4400 0 30CF	) ; ; ; ; ; ; ; ; ;		STD LD BSC BSI DC	L	N5C5 N5C5 G5C0+&- F000 /30CF	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID	3A13786 3A13786 3A13796 3A13796 3A13796
073D 073E 073F 0740 0742 0744	0 C84A 0 D840 0 C040 0 4C18 0 4400 0 30CF	0 0745 0 0769 0 0F98	A5C0 G5C0	STD LD BSC BSI DC BSI		N5C5 N5C5 G5CO+&- F0OO /3OCF FOOE	LD A#/0000 Q#/0000 BRANCH ON ZERD STD-EA INCORRECT ERR ID CK LOCK ON ERROR	3A13786 3A13786 3A13796 3A13796 3A13796 3A13796
073D 073E 073F 0740 0742 0744 0745	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 440C	0745 0745 00669 00698		STD LD BSC BSI DC BSI MDX	L	N5C5 N5C5 G5C0+&- F000 /3OCF F00E A5C0	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP	3A13786 3A13796 3A13796 3A13796 3A13796 3A13796 3A13796
073D 073E 073F 0740 0742 0744 0745 0747	0 C84A 0 D840 0 C04C 0 4C18 0 4400 0 30CF 0 4400 0 70F5 0 C044	0745 0745 0769 0069		STD LD BSC BSI DC BSI MDX LD	L	N5C5 N5C5 G5C0+&- F000 /3OCF F00E A5C0 N5C6	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF	3A13780 3A13790 3A13790 3A13790 3A13790 3A13790 3A13790 3A13790
073D 073E 073F 0740 0742 0744 0745 0747 0748	0 C84A 0 D840 0 C04C 0 4C18 0 4400 0 30CF 0 4400 0 70F5 0 C044	0745 0745 0769 0069 00698		STD LD BSC BSI DC BSI MDX LD BSC	L	N5C5 N5C5 G5C0+&- F000 /3OCF F00E A5C0 N5C6 G5C2+&-	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO	3A13780 3A13789 3A13790 3A13790 3A13790 3A13790 3A13790 3A13790 3A13790
073D 073E 073F 0740 0742 0744 0745 0747 0748 0749	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 440C 0 70F5 0 C044 0 4C18	0745 0745 0 0F69 0 0F98 0 074E		STD LD BSC BSI DC BSI MDX LD BSC BSI	L	N5C5 N5C5 G5C0+&- F000 /3OCF F00E A5C0 N5C6 G5C2+&- F000	LD A#/0000 Q#/0000 BRANCH ON ZERU STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERU STG-EAG1 INCORRECT	3A13788 3A13790 3A13791 3A13792 3A13793 3A13794 3A13795 3A13796 3A13796
073D 073E 073F 0740 0742 0744 0745 0747 0748 0749 0748	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 440C 0 70F5 0 C044 0 4C18 0 440C	0745 0745 0769 0798	G5C0	STD LD BSC BSI DC BSI MDX LD BSC BSI DC	L	N5C5 N5C5 G5C0+&- F000 /30CF F00E A5C0 N5C6 G5C2+&- F000 /30CF	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EAG1 INCORRECT ERR ID	3A13788 3A13790 3A13791 3A13793 3A13793 3A13795 3A13795 3A13795 3A13795 3A13795
073D 073E 073F 0740 0742 0744 0745 0747 0748 0749 074B 074D	0 C844 0 D840 0 C040 0 4C18 0 4400 0 30CF 0 C044 0 4C18 0 4400 0 30CF 0 4400	0 745 0 0745 0 0769 0 0798 0 074E 0 0769		STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI	L	N5C5 N5C5 G5C0+&- F000 /30CF F00E A5C0 N5C6 G5C2+&- F000 /30CF F005	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EAG1 INCORRECT ERR ID CK LOCK ON ERROR	3A13788 3A13790 3A13790 3A13793 3A13793 3A13794 3A13796 3A13796 3A13796 3A13796
073D 073E 073F 0740 0742 0744 0745 0747 0748 0749 074B 074D	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 440C 0 70F5 0 C044 0 4C18 0 440C	0 745 0 0745 0 0769 0 0798 0 074E 0 0769	G5C0	STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI MDX	L L L	N5C5 N5C5 G5C0+&- F000 /30CF F00E A5C0 N5C6 G5C2+&- F000 /30CF F005 A5C0	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EA&I INCORRECT ERR ID CK LOCK ON ERROR LOOP	3A13788 3A13796 3A13796 3A13793 3A13793 3A13796 3A13796 3A13796 3A13796 3A13796 3A13806 3A13806
073D 073E 073F 0740 0742 0744 0745 0747 0748 0748 0748 0748 0748	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 C044 0 4C18 0 440C 0 30CF 0 70EC	0745 0745 0F69 0F98 074E 074E	G5C0 G5C2	STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI MDX	L L L	N5C5 N5C5 G5C0,&- F000 /30CF F00E A5C0 N5C6 G5C2,&- F000 /30CF F005 A5C0	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EAG1 INCORRECT ERR ID CK LOCK ON ERROR LOOP	3A13786 3A13796 3A13796 3A13796 3A13796 3A13796 3A13796 3A13796 3A13796 3A13796 3A13806 3A13806 3A13806
073D 073E 073F 0740 0742 0744 0745 0747 0748 0749 0748 0748 0748 0750	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 C044 0 4C18 0 440C 0 30CF 0 C036	0745 0745 0769 0798 074E 0769	G5C0	STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI MDX	L L L	N5C5 N5C5 G5C0,&- F000 /30CF F00E A5C0 N5C6 G5C2,&- F000 /30CF F005 A5C0	LD A#/0000 Q#/0000 BRANCH ON ZERD STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EAG1 INCORRECT ERR ID CK LOCK ON ERROR LOOP **********************************	3A13788 3A13790 3A13791 3A13792 3A13792 3A13794 3A13795 3A13795 3A13795 3A13795 3A13800 3A13800 3A13800 3A13800
073D 073E 073F 0740 0742 0745 0747 0748 0749 0748 0749 0748 0750	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 30CF 0 440C 0 30CF 0 440C 0 30CF 0 440C 0 70EC	0745 0745 0769 0798 074E 0769	G5C0 G5C2	STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI DC BSI DC STO	L L L	N5C5 N5C5 G5C0+&- F000 /30CF F00E A5C0 N5C6 G5C2+&- F000 /30CF F005 A5C0 ************************************	LD A#/0000 Q#/0000 BRANCH ON ZERD STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EA&1 INCORRECT ERR ID CK LOCK ON ERROR LOOP **********************************	3A13788 3A13790 3A13791 3A13793 3A13794 3A13799 3A13799 3A13799 3A13790 3A13790 3A13800 3A13800 3A13800 3A13800 3A13800
073D 073E 073F 0749 0742 0744 0745 0747 0748 0749 0748 0740 074E 0750	0 C84A 0 D840 0 C04C 0 4C18 0 30CF 0 440C 0 70F5 0 C044 0 440C 0 30CF 0 440C 0 70EC	0 745 0 0769 0 0798 0 074E 0 0769	G5C0 G5C2	STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI MDX *****	L L L	N5C5 N5C5 G5C0+&- F000 /30CF F00E A5C0 N5C6 G5C2+&- F000 /30CF F005 A5C0 ************************************	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EA&I INCORRECT ERR ID CK LOCK ON ERROR LOOP **********************************	3A13788 3A13790 3A13791 3A13793 3A13793 3A13794 3A13796 3A13796 3A13796 3A13806 3A13806 3A13806 3A13806 3A13806 3A13806
073D 073E 073F 0740 0742 0744 0745 0747 0748 0749 0748 0740 074E 0750	0 C84A 0 D840 0 C04C 0 4C18 0 440C 0 70F5 0 C044 0 4C18 0 440C 0 70EC 0 C036 0 D039 0 C835	0745 0745 0769 0798 074E 0769	G5C0 G5C2	STD LD BSC BSI MDX LD BSC BSI MDX ***** LD STO STO LDD	L L L	N5C5 N5C5 G5C0,&- F000 /30CF F00E A5C0 N5C6 G5C2,&- F000 /30CF F005 A5C0 ************************************	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EA&1 INCORRECT ERR ID CK LOCK ON ERROR LOOP **********************************	3A13787 3A13788 3A13798 3A13799 3A13799 3A13799 3A13799 3A13799 3A13798 3A13809 3A13809 3A13809 3A13809 3A13809 3A13809 3A13809
073D 073E 073F 0740 0742 0745 0747 0748 0749 0748 0748 0750	0 C84A 0 D840 0 C04C 0 4C18 0 30CF 0 440C 0 70F5 0 C044 0 440C 0 30CF 0 440C 0 70EC	0745 0745 0769 0798 074E 074E 0769	G5C0 G5C2	STD LD BSC BSI DC BSI MDX LD BSC BSI DC BSI MDX *****	L L L	N5C5 N5C5 G5C0+&- F000 /30CF F00E A5C0 N5C6 G5C2+&- F000 /30CF F005 A5C0 ************************************	LD A#/0000 Q#/0000 BRANCH ON ZERO STD-EA INCORRECT ERR ID CK LOCK ON ERROR LOOP LD /FFFF BRANCH ON ZERO STG-EA&1 INCORRECT ERR ID CK LOCK ON ERROR LOOP **********************************	3A13788 3A13790 3A13791 3A13793 3A13794 3A13796 3A13796 3A13796 3A13796 3A13806 3A13806 3A13806 3A13806 3A13806 3A13806 3A13806

0758									
	O	4018	0750		BSC	L	6504.8-	BRANCH ON ZERO	3A138100
			0F69		BSI	Ĺ	F000	STD-EA INCORRECT	34138110
0750	ŏ	3000	0.07		DC.	-	/30D0	ERR ID	3A138120
			0F98	6504		L	_	CK LUCK UN EBBUB	3A138130
075F			0. 70	0,000	MDX	_	A5C4		3A138140
0760					10		NECA	10 /1111	24128150
		F028			END		N5C3	to /1111	34138140
0762	ň	4018	0767		BSC		G5C4 - 5 -	BRANCH ON TERO	34130100
0764	ň	4400	0F69		BCI	-	5000	CTD_EACH INCORRECT	34130170
		3001	01 0 7		DC .	_	(300)	EDD ID	34130100
0767	~	4400	OFC4	C E C 4	DC 1		72001	CK TOCK ON EDGOD	34136190
		70E7	UFC-	6766	MU A D 2 I	L	P005	LA LUCK UN EKKUK	34136200
0109	U	1061			nux		AJU4	LUUP	34130210
0744	^	COlF		A5C8		***	**************************************	BRANCH ON ZERO STD-EA&1 INCORRECT ERR ID CK LOCK ON ERROR LOOP	3A13622U
		D020		AJUO	LU		NECE	LD 71111	24130530
		D020			STO		NOCO	STUKE /FFFF	3A138240
		D020			STO		N5C6		3A138250
		C819			STO		N5C7	15 44 (0000 04 (0000	3A138260
					LDD STD LD LD BSC BSI				34138270
		D81D C017			210		N5C6 N5C1	STORE IN N5C6 & N5C7 LD /0000	3A138280
	_				LU		NOC1	LD /0000	3A138290
0771	ŭ	CGIB	0777 0F69		LU		N5C6	LU /0000	3A138300 3A138310
0774	v	4400	0777		B 2 C	Ļ		SKANCH UN ZEKU	3A138310
0774	Ŏ	3000	UF69		D 2 1	L	1200	LD /0000 BRANCH ON ZERO STD-DDD-EA INCORRECT	3A138320
		30D2	0500		DC		/3002	FKK 113	3813833U
0777	Ü	70F0	0F98	6568	821	L			3A138340
					MDX		A5C8	LOOP LD /FFFF	3A138350
		C013			LD		N5C7 N5C3 G5CA,&- F000	LD /FFFF ZERO WITH /FFFF BRANCH ON ZERO STD-ODD-EA&1 LOADED	3A13836U
		FOOE	0701		EOR		N5C3	ZERO WITH /FFFF	3A138370
			0781		BSC	L	65CA, &-	BRANCH UN ZERU	3A138380
-			0F69		BSI	L		SID-ODD-EAGI LUADED	3A138390
		3003			DC		/30D3	FRR IU	3A1384UU
			OFC4	GSCA		L	F005		3A138410
		70E 6			MDX		A5C8	LOUP	3A138420
		C005			LD		N5C3		3A138430
		D007			STO		N5C6		3A138440
		D007			STO		N5C7		3A138450
	0	7007			MDX	_	A600		3A138460
0788	_	0000			BSS	E			3A138470
		0000		N5C1	DC		/0000		3A138480
0789	n								3
		0000			DC		/0000		3A138490
	0	FFFF		N5C3	DC		/FFFF		
078B	0	FFFF FFFF		N5C4	DC DC		/FFFF		3A138490
078B 078C	0	FFFF FFFF		N5C4 N5C5	DC DC DC		/FFFF /FFFF		3A138490 3A138500
078B 078C 078D	0 0 0	FFFF FFFF FFFF		N5C4 N5C5 N5C6	DC DC DC DC		/FFFF /FFFF /FFFF		3A138490 3A138500 3A138510
078B 078C 078D	0 0 0	FFFF FFFF		N5C4 N5C5	DC DC DC		/FFFF /FFFF		3A138490 3A138500 3A138510 3A138520 3A138530 3A138540
078B 078C 078D	0 0 0	FFFF FFFF FFFF		N5C4 N5C5 N5C6 N5C7	DC DC DC DC		/FFFF /FFFF /FFFF /FFFF		3A138490 3A138500 3A138510 3A138520 3A138530 3A138540
078B 078C 078D	0 0 0	FFFF FFFF FFFF		N5C4 N5C5 N5C6 N5C7	DC DC DC DC		/FFFF /FFFF /FFFF /FFFF	OF LDX OPERATION	3A138490 3A138500 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560
078B 078C 078D	0 0 0	FFFF FFFF FFFF		N5C4 N5C5 N5C6 N5C7 *	DC DC DC DC		/FFFF /FFFF /FFFF /FFFF /FFFF	OF LDX OPERATION	3A138490 3A138500 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138570
078B 078C 078D 078E	0 0 0 0	FFFF FFFF FFFF FFFF		N5C4 N5C5 N5C6 N5C7 * *	DC DC DC DC DC	***	/FFFF /FFFF /FFFF /FFFF TEST (	OF LDX OPERATION	3A138490 3A138500 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138570 3A138570
078B 078C 078D 078E	0 0 0 0	FFFF FFFF FFFF FFFF	******	N5C4 N5C5 N5C6 N5C7 * * *	DC DC DC DC DC	***	/FFFF /FFFF /FFFF /FFFF TEST (	OF LDX OPERATION	3A138490 3A138500 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138590
078B 078C 078D 078E	0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF	**************************************	N5C4 N5C5 N5C6 N5C7 * * * ******	DC DC DC DC DC	***	/FFFF /FFFF /FFFF /FFFF TEST (	OF LDX OPERATION	3A138490 3A138500 3A138520 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138590 3A138600
078B 078C 078D 078E ************************************	0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF TATIONS	********* A OR TRUCTION	N5C4 N5C5 N5C6 N5C7 * * * ******************************	DC DC DC DC DC	***: ***:	/FFFF /FFFF /FFFF TEST (	OF LDX OPERATION  ********  *************************	3A138490 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138580 3A138600 3A138600
078B 078C 078D 078E ************************************	0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF FFFF TAT	A OR TRUCTION	N5C4 N5C5 N5C6 N5C7 * * ****** *LA- *BEL	DC DC DC DC DC DC	***: ***: FT ***:	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138500 3A138510 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138600 3A138610 3A138610
078B 078C 078D 078E ************************************	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF TATI	A OR TRUCTION	N5C4 N5C5 N5C6 N5C7 * * * ******************************	DC DC DC DC DC DC	***: ***: FT ***:	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ********  *************************	3A138490 3A138500 3A138510 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138600 3A138600 3A138630
078B 078C 078D 078E ************************************	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF TAT INS ***** 6500 7003	**************************************	N5C4 N5C5 N5C6 N5C7 * * ****** *BEL	DC DC DC DC DC DC	***: ***: FT ***:	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ********  *************************	3A138490 3A138500 3A138510 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138600 3A138600 3A138630
078B 078C 078D 078E ************************************	0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF FFFF 0 1 NS 1 NS 1 NS 2 0 0 0 3 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0	**************************************	N5C4 N5C5 N5C6 N5C7 * * ****** *LA- *BEL	DC DC DC DC DC DC DC DC DC DC DC DC DC D	***: ***: FT ***:	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ********  *************************	3A138490 3A138500 3A138510 3A138530 3A138540 3A138550 3A138560 3A138570 3A138580 3A138600 3A138600 3A138600
0788 078C 078D 078E ****** CORE ADDR ***** 078F 0791 0792 0794	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF DAT 1NS ***** 67003 4400 30D4	*********** A OR TRUCTION ********* 0792	N5C4 N5C5 N5C6 N5C7 * * ****** *LA-  *BEL   ******	DC DC DC DC DC DC DC	***: FT ***: L1	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138540 3A138550 3A138570 3A138560 3A138590 3A138600 3A138610 3A138620 3A138630 3A138640
078B 078C 078B 078E ************************************	0 0 0 0 0 0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF DAT INS ****** 6500 7003 4400 3004 4400	*********** A OR TRUCTION ********* 0792	N5C4 N5C5 N5C6 N5C7 * * ****** *BEL	DC DC DC DC DC DC DC DC DC DC DC DC DC D	***: FT ***:	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  *********  REMARKS ID&SEQ# AT RIGHT  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138560 3A138580 3A138600 3A138610 3A138620 3A138620 3A138630 3A138650
078B 078C 078B 078E ************************************	0 0 0 0 0 0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF DAT 1NS ***** 67003 4400 30D4	********** A OR TRUCTION ******** 0792	N5C4 N5C5 N5C6 N5C7 * * ******* *BEL *BEL *A600 G600	DC DC DC DC DC DC DC ****** ATION ***** LDX MDX BSI DC BSI MDX	****  FT ***  L1  L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138500 3A138510 3A138530 3A138540 3A138550 3A138560 3A138570 3A138590 3A138610 3A138610 3A138620 3A138640 3A138640 3A138640 3A138640 3A138640 3A138660 3A138660
0788 078C 078D 078E ****** 078F 0791 0792 0794 0795 0797	***	FFFF FFFF FFFF FFFF DAT: 1NS: ***** 6500 7003 4400 3004 4400 70F7	0792 0F69	N5C4 N5C5 N5C6 N5C7 * * ******* *BEL ******* A600 G600	DC DC DC DC DC DC DC ****** ATION ***** LDX MDX BSI DC BSI MDX *****	**** FT **** L1 L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138550 3A138550 3A138560 3A138580 3A138580 3A138600 3A138600 3A138620 3A138630 3A138640 3A138650 3A138660 3A138660 3A138660 3A138660 3A138680 3A138680
0788 078C 078B 078E ************************************	****	FFFF FFFF FFFF FFFF DAT INS: ****** 6500 30D4 4400 70F7 6600	0792 0F69	N5C4 N5C5 N5C6 N5C7 * * ******* *BEL *BEL *A600 G600	DC DC DC DC DC DC DC PER-ATION ************************************	**** FT **** L1 L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138560 3A138580 3A138610 3A138610 3A138620 3A138640 3A138650 3A138660 3A138660 3A138660 3A138670 3A138690 3A138690 3A138690
0788 078C 078D 078E ***** 078F 0791 0792 0794 0795 0797	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FFFF FFFF FFFF FFFF FFFF 1NS ***** 6500 7003 4400 70F7 6600 7003	A OR TRUCTION ********** 0792 0F69 0FC4	N5C4 N5C5 N5C6 N5C7 * * ****** *BEL ******* A600 G600 H600	DC DC DC DC DC DC DC DC DC DC DC DC DC D	**** FT **** L1 L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138550 3A138550 3A138560 3A138580 3A138580 3A138600 3A138600 3A138620 3A138630 3A138640 3A138650 3A138660 3A138660 3A138660 3A138660 3A138680 3A138680
0788 078C 078D 078E ****** 078F 0791 0792 0794 0795 0797	00000	FFFF FFFF FFFF FFFF 1NS ***** 6500 7003 4400 70F7 6600 7003 4400	A OR TRUCTION ********** 0792 0F69 0FC4	N5C4 N5C5 N5C6 N5C7 * * ******* *BEL ******* A600 G600	DC DC DC DC DC DC DC DC DC DC DC ATION ************************************	**** FT **** L1 L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138540 3A138550 3A138560 3A138560 3A138580 3A138610 3A138610 3A138620 3A138640 3A138650 3A138660 3A138660 3A138660 3A138670 3A138690 3A138690 3A138690
0788 078C 078D 078E ***** 078F 0791 0799 0798 0798 0798 0798	****	FFFF FFFF FFFF FFFF FFFF 1NS ***** 6500 7003 4400 70F7 6600 7003 4400 30D5	0792 0F69 0FC4 0798	N5C4 N5C5 N5C6 N5C7 * * ****** *BEL *BEL *A600 G600 H600 ******	DC DC DC DC DC DC DC DC DC ATION ************************************	**** FT *** L1 L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138500 3A138520 3A138530 3A138540 3A138550 3A138560 3A138560 3A138660 3A138600 3A138600 3A138600 3A138660 3A138660 3A138660 3A138660 3A138670 3A138680 3A138680 3A138680 3A138680 3A138680 3A138680
0788 078C 078D 078E ****** 078F 0791 0799 0794 0798 0798 0798 0798 0798 0798	00000	FFFF FFFF FFFF FFFF DAT INS ***** 6500 7003 4400 7067 6600 7003 4400 3005 4400 3005 4400	0792 0F69 0FC4 0798	N5C4 N5C5 N5C6 N5C7 * * ****** *BEL ******* A600 G600 H600	DC DC DC DC DC DC DC DC DC DC ATION ************************************	**** FT *** L1 L L ***	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138500 3A138520 3A138530 3A138540 3A138550 3A138560 3A138570 3A138590 3A138690 3A138630 3A138640 3A138650 3A138650 3A138650 3A138650 3A138650 3A138670 3A138670 3A138730
0788 078C 078D 078E ****** 078F 0791 0799 0794 0798 0798 0798 0798 0798 0798	00000	FFFF FFFF FFFF FFFF FFFF 1NS ***** 6500 7003 4400 70F7 6600 7003 4400 30D5	0792 0F69 0FC4 0798	N5C4 N5C5 N5C6 N5C7 * * ******* *BEL ******* A600 G600 H600 ***** A602 G602 H602	DC DC DC DC DC DC DC ******************	**** FT *** L1 L *** L2 L	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138500 3A138520 3A138530 3A138550 3A138550 3A138560 3A138570 3A138590 3A138600 3A138610 3A138620 3A138630 3A138660 3A138660 3A138660 3A138670 3A138670 3A138720
0788 078C 078D 078E ***** 078F 0791 0792 0794 0795 0798 0798 0798 0798 0798 0798	************	FFFF FFFF FFFF FFFF DAT INS ***** 6500 7003 4400 7067 6600 7003 4400 3005 4400 3005 4400	0792 0F69 0FC4 0798	N5C4 N5C5 N5C6 N5C7 * * ******* *BEL ******* A600 G600 H600 ***** A602 G602 H602	DC DC DC DC DC DC DC ******************	**** FT *** L1 L *** L L ***	/FFFF /FFFF /FFFF  TEST ( ************************************	OF LDX OPERATION  ***********************************	3A138490 3A138510 3A138520 3A138530 3A138550 3A138550 3A138560 3A138580 3A138580 3A138600 3A138610 3A138620 3A138630 3A138640 3A138650 3A138660 3A138670 3A138670 3A138710 3A138710 3A138710 3A138710

07/2 0 (	C500	080C		LD	Ll	N601	LD ADDR OF N601 & XR 1 ZERO WITH ADDR OF N601 BRANCH ON ZERO IX 1 NOT LOADED ERR ID CK LOCK ON ERKOR	34138780
0744 0	F067			EDR		N601	ZERO WITH ADDR DE NAOL	34138790
07A5 0	4C18	07AA		BSC	ı	6604.6-	ARANCH ON ZERO	34136140
0747 0	4400	0 F A Q		901		600474	THE LACT LOADED	3A1388UU
0749 0	3004	0109		D21	L	13004	IX I NOT LUADED	3A138810
07A7 U .	2006			DC .		73006	EKK ID	3A138820
D/AA O	4400	0FC4	6604	821	L	F005	CK LOCK ON ERKOR	3A138830
D7AC O	70F4			MDX		A604	LOOP	3A138840
			****	****	***	********	LOOP	34138850
D7AD O	6200		A606	LDX	2	0	************************* LD DISP#O TO XR 2 LD /FFFF LD AUDR OF N601 & XR 2 ZERO WITH ADDR OF N601 BRANCH ON ZERO XR 2 NOT LOADED ERR ID CK LOCK ON ERROR LOOP	34130050
07AF 0	COSE			10	_	N4.03	10 /EEEE	3A130000
3745 0	C 4 0 0	0000				NOUS	LU /FFFF	3A138870
07AP U (	5050	UBUL		LU	LZ	MOUT	ED MODE OF MOOT & XE S	3A138880
OLRT O	FUSA			EDR		N601	ZERO WITH ADDR OF N601	3A138890
07BZ 0 4	4C18	0787		BSC	L	-3,606D	BRANCH ON ZERO	3A138900
0784 O 4	4400	0F69		BSI	L	F000	XR 2 NOT LOADED	34138910
0786 0	30D7			DC		/3007	FRR ID	34138020
0787 0	4400	OFC4	6606	ACT		F005	CK TUCK ON EDUCA	34130320
0789 N	70F 3	0.04	0000	MUA	-	4606	LOOP ON ERROR	3A13693U
0.07 0	,,,					AOUO	LUUP	3A1 389 40
				****		********	*******	3A138950
D7BA O	6300		A 608	LDX	3	0	LD DISP#O TO XR 3	3A138960
07BB 0 (	C052			LD		N6 03	LD /FFFF	3A138970
07BC 0 (	C700	080C		LD	L3	N601	LD ADDR OF N601 & XR 3	341 38980
078F 0	F040			FOR		N601	TERR HITH ADDR DE NACH	: 3A130000
178E 0	4618	0764		850		6608 6-	PRANCH ON JERO	: 3A13099U
0761 0	4400	0154		950		500016-	DRANCH UN ZERU	3A1 39000
7761 0	7400	UF67		B21	L	F000	XK 3 NOT LUADED	3A139010
0763 0	30D8	-		DC		/30D8	ERR ID	3A139020
0764 0	4400	OFC4	G608	BSI	L	F005	CK LOCK ON ERROR	3A139030
0766 0	70F3			MDX		A608	LOGP	34139040
			****	****	***	********	CK LOCK ON ERROR LOOP  *********************************	34139050
0707 0	61FF		AGOA	I DX	1	-1	ID VP 1 HITH -1	34130040
07CB 0	C045			10	•	N4 03	CD VK I MILL -I	3A137UOU
0700 0	CEAS	0000		נט		MOUS	LU /1111	3A139070
0709 0 0	C500	0800		LD	LI	N601	LD ADDR OF N601 & XR 1	3A139080
07CB 0	FO3F			EOR		N6 00	ZERO WITH ADDR OF N600	3A139090
07CC 0 4	4C18	07D1		BSC	L	G60A, &-	BRANCH ON ZERO	34139100
07CE 0	4400	0F69		BSI	L	F000	AR 1 NOT LOADED	34139110
07D0 0	3009			DC	_	/3000	FPP IN	24120120
701 0	4400	DEC4	CAGA	001		FANE	CK TOCK OF EDUOD	3413912U
702 0	7000	01.64	GOUM	031	L	F005	CK EUCK UN EKKUK	3A139130
) 1U3 U	10F3			MUX		AGUA	LOOP	3A139140
			****	****	***	********	LOOP  ******************  LD XR 2 WITH -1  LD /FFFF  LD ADDR OF N601 & XR 2  ZERO WITH ADDR OF N600  BRANCH ON ZERO  XR 2 NOT LOADED  ERR ID  CK LOCK ON ERROR	3A139150
D7D4 0	62FF		A60C	LDX	2	-1	LD XR 2 WITH -1	3A139160
07D5 O (	C038			LD		N603	LD /FFFF	3A139170
0706 0 (	C600	080C		LD	L2	N601	LD ADDR OF M601 & XR 2	34139180
07D8 0	F032			FOR		N6.00	TERR WITH ARREST DE NACO	34139190
700 0	4C10	070E		B C C		C40C C	DEALCH ON TERM	JA137170
700 0	7C10	0105		D3C	L	6000,6-	BRANCH UN ZERU	3A1 39200
7706 0	4400	UF69		R21	L	F000	XR 2 NOT LOADED	3A139210
ס פטינ	300 A			DC		/30DA	ERR ID	3A139220
07DE O 4	4400	OFC4	G60C	BSI	L	F 005	CK LOCK ON ERROR	3A139230
7E0 0	70F3			MDX		A60C	CK LOCK ON ERROR	3A139240
			****	****	***	*******	******	34130350
751 0	4355		AANE	LDV	2	_1	10 vs 2 utru	34137230
D7E1 0 ( D7E2 0 (	0366		MOUE	LUX	,	-1	LD XR 3 WITH -1 LD /FFFF LD ADDR OF N601 & XR 3 ZERO WITH ADDR OF N600 BRANCH ON ZERO	3A1 39260
01EZ U (	CU28			LU		N6U3	LU /FFFF	3A139270
0/E3 0 (	C /00	080C		LD	L3	N601	LD ADDR OF N601 & XR 3	3A139280
07E5 0 1	F025			EOR		N600	ZERO WITH ADDR OF N600	34139290
07E6 0 4	4C18	07EB		BSC	L	G60F.&-	BRANCH ON ZERO	34139300
07E8 0		0F69		BSI	Ĺ	F000	XR 3 NOT LOADED	34130310
07EA 0		0.07			L			3A139310
				DC		/30DB	ERR ID	3A1 39 320
07EB 0		OFC4	<b>G60E</b>	BSi	L	F005	CK LOCK ON ERROR	3A139330
07ED 0 '	70F3			MDX		A60E	LOOP	3A139340
			*****	****	***	*******	*******	3A139350
	6500	0001	B600		Ll		LD XR 3 WITH &1	3A139360
				LD		N603	LD /FFFF	
07EE 0 (		0000						3A139370
07EE 0 (		UBUL		LD	Ll	N601	LD ADDR OF N601 & XR 1	3A139380
07EE 0 ( 07F0 0 (	C500			EOR		N602	ZERU WITH ADDR OF N602	3A139390
07EE 0 ( 07F0 0 ( 07F1 0 (	C500 F019			BSC	L	J600, E-	BRANCH ON ZERO	3A139400
07EE 0 ( 07F0 0 ( 07F1 0 (	C500 F019	07F9				F000	LONG FORM LDX-FAILED	3A139410
07EE 0 ( 07F0 0 ( 07F1 0 ( 07F3 0 (	C500 F019 4C18			BSI	L			ンベルンフマルリ
07EE 0 ( 07F0 0 ( 07F1 0 ( 07F3 0 ( 07F4 0 4	C500 F019 4C18 4400			BS I	L			24120420
07EE 0 0 07F0 0 0 07F1 0 0 07F3 0 1 07F4 0 4 07F6 0 4	C500 F019 4C18 4400 30DC	0F69	1400	DC	_	/30DC	ERR ID	3A139420
07EE 0 0 07F0 0 0 07F1 0 0 07F3 0 0 07F4 0 0 07F6 0 0	C500 F019 4C18 4400 30DC 4400	0F69	J600	DC BSI	L	/30DC F005	ERR ID CK LOCK ON ERROR	3A139430
07EE 0 ( 07F0 0 ( 07F1 0 ( 07F3 0 ( 07F4 0 4 07F6 0 4	C500 F019 4C18 4400 30DC 4400	0F69		DC BSI MDX	L	/30DC F005 8600	ERR ID	

0756 0 4700 0005	B602	LDX	12	N603	LD XR 3 WITH /FFFF	3A139460
07FC 0 6780 080E 07FE 0 C010	8002	LD	13	N604	LD /0001	3A139470
07FF 0 C700 080C		LD	13	N601	LD ADDR OF N601 & XR 3	3A139480
0801 0 F009		EOR		N600	ZERO WITH ADDR OF N600	3A139490
0802 0 4C18 0807		BSC	L	J602, &-	BRANCH ON ZERO	3A139500
0804 0 4400 0F69		BSI	Ē	F000	INDIRECT LDX FAILED	3A139510
0806 0 30DD		DC	_	/30DD	ERR ID	3A139520
0807 0 4400 OFC4	<b>J602</b>	ESI	L	F005	CK LOCK ON ERROR	3A139530
0809 0 70F2		MDX		B602	LOOP	3A139540
080A 0 7005		MDX		A640	EXIT TO NEXT ROUTINE	3A139550
080B 0 080B	N600	DC		N600		3A139560
080C 0 080C	N601	DC		N601		3A139570
080D 0 080D	N602	DC		N602		3A139580 3A139590
OBOE O FFFF	N603	DC		/FFFF /0001		3A139600
080F 0 0001	N604	DC		70001		3A139610
	*			TEST	DF STX OPERATION	3A139620
	*			1631	OF STR OF ENAPTION	3A139630
	****	****	***	*******	******	3A139640
*************					**********	3A139650
CORE DATA OR	*LA-	OPER-				3A139660
ADDR INSTRUCTION	*BEL	ATION	FT	OPERANDS !	& REMARKS ID&SEQ# AT RIGHT	3A139670
************	*****	*****	***	*******	***********	3A139680
0810 0 CO6D	A640	LD		N644	LD /FFFF	3A139690
0811 0 DO69		STO		N640	SAVE	3A139700
0812 0 COFF	H640	LD		H640	LD /COFF	3A139710
0813 0 6867		STX		N640	STORE INST REG AT N640	3A139720
0814 O FOFD	K640	EOR		H640	CK THAT ACC WAS NOT	3A139730
	*	056		6440.6	* RESET BY STX	3A139740 3A139750
0815 0 4C18 081D		BSC	Ļ	G640,&-	BRANCH ON ZERO ACC GONE AFTER STX	3A139760
0817 0 4400 0F69		BSI	L	F000 /3167	ERR ID	3A139770
0819 0 3167 081A 0 4400 0F98		DC BSI	L	F00E	CK LOCK ON ERROR	3A139780
081C 0 70F3		MDX		A640	CR EDGR DIT ERROR	3A139790
081D 0 C05D	G640	LD		N640	CK THAT STX STORED CORECT	3A139800
081E 0 F05D	0040	EOR		N642		3A139810
081F 0 4C18 0824		BSC	L	G641, E-	BRANCH ON ZERO	3A139820
0821 0 4400 0F69		BSI	Ĺ	F000	I CTR NOT STORED	3A139830
0823 0 30DE		DC		/30DE	ERR ID	3A139840
0824 0 4400 OFC4	G641	BSI	L	F005	CK LOCK ON ERROR	3A139850
0826 0 70E9		MDX		A640	LOOP	3A139860
	****	****	***	*****	*****	3A139870
0827 0 C056	A642	FD		N644	LD /FFFF	3A139880
0828 0 D052		STO	_	N640	SAVE	3A139890
0829 0 6100		LDX	_	0	LD XR 1 WITH /0000	3A139900
082A 0 6950		STX	1	N640	STORE CEXT 10 AT N640	3A139910 3A139920
0828 0 CO4F		LD BSC		N640 G642-5-	LD C%N640¤ Branch on Zero	3A139930
082C 0 4C18 0831 082E 0 4400 0F69		BSC BSI	L	G642,&- F000	XR 1 NOT STORED	3A139940
082E 0 4400 0F69		DC B21	L	/30DF	ERR ID	3A139950
0831 0 4400 OFC4	G642	BSI	L	F005	CK LOCK ON ERROR	3A139960
0833 0 70F3		MDX	-	A642	LOOP	3A139970
0033 0 1013	****		***		********	3A139980
0834 0 CO49	A644	LD		N644	LD /FFFF	3A139990
0835 0 D045		STO		N640	SAVE	3A140000
0836 0 6200		LDX		. 0	LD XR 2 WITH /0000	3A140010
0837 0 6A43		STX	2	N640	STORE CEXE 20 AT N640	3A140020
0838 0 CO42		LD		N640	LD C%N640D	3A140030
0839 0 4C18 083E		BSC	L	G644, &-	BRANCH ON ZERO	3A140040
083B 0 4400 0F69		BSI	L	F000	XR 2 NOT STORED	3A140050
083D 0 30E0	C444	DC		/30E0	ERR ID	3A140060 3A140070
083E 0 4400 OFC4 0840 0 70F3	G644	BS I MDX	L	F005 A644	CK LOCK ON ERROR LOOP	3A140080
0040 0 1053	****		***		******	3A140090
0841 0 CO3C	A646	LD	. + +	N644	LD /FFFF	3A140100
0842 0 D038	_5+5	STO		N640	SAVE	3A140110
0843 0 6300		LDX	3	0	LD XR 3 WITH /0000	3A140120
0844 0 6836		STX		N640	STORE CEXE 30 AT N640	3A140130

0845 0 C035			LD		N640	LD CIN640=	3A140140
0846 0 4C18	0848		BSC	L	6646,6-	BRANCH ON ZERO XR 3 NOT STORED	3A140150
0848 0 4400	0F69		BSI	L	F000	XR 3 NOT STORED	3A140160
084A 0 30E1			DC		/30F1	FRR ID	3A140170
084B 0 4400	OFC4	G 64 6		L	F005		3A140180
084D 0 70F3			MDX		A646	LOOP	3A140190
							3A140200
084E 0 CO2E		A648	LD		N643		3A140210
084F 0 D02B			\$10	_	N640 -1 N640	SAVE	3A140220
0850 0 61FF 0851 0 6929 0852 0 C028			LDX	1	-1	···· - ··· · · · · · · · · · · · · ·	3A140230
0851 0 6929			21X	1	N640		3A140240
0852 0 C028			LD		N640	LD CIN640D	3A140250 3A140260
0853 0 F02A			EOR		N644	ZERO WITH /FFFF BRANCH ON ZERO XR 1 NOT STORED	3A140270
0854 0 4C18 0856 0 4400	0659		BSC		G648,&- F000	AD 1 MUL CLUBED	3A140280
0858 0 30E2	0137		DC D21	٠.	/30E2	ERR ID	3A140290
0859 0 4400		GAAR			F005		3A140300
085B 0 70F2		0040	MDX		A648	LOOP	3A140310
0000 0 1012		****				******	3A140320
085C 0 C020	ı	A64A				LD /0000	3A140330
0850 0 0010			STO		N640	SAVE	3A140340
085E 0 62FF			LDX	2	-1 N640	LD XR 2 WITH /FFFF	3A140350
085F 0 6A1E			STX	2	N640	STORE CXXR 2m AT N640	3A140360
0860 0 CO14			LD		N640	LD C3N6400	3A140370
0861 0 F010			E OR		N640 N644 G64A,&— F000	ZERO WITH /FFFF	3A140380
0862 0 4018			BSC	L	G64A,&-	BRANCH ON ZERO XR 2 NOT STORED	3A140390
0864 0 4400	0F69		BSI	L	F000	XR 2 NOT STORED	3A140400
0866 0 30E3	,		DC		/30E3		3A140410
0867 0 4400	OFC4	G64A		L	F005	ERR ID CK LOCK ON ERROR	3A140420
0869 0 70F2	•		MDX		A64A	LUUP	3A140430
							3A140440
086A 0 CO12		A64C	LD		N643	LD /0000	3A140450
086B 0 D00f	•		STO	_		SAVE LD XR 3 WITH /FFFF	3A140460
086C 0 63FF 086D 0 6B0C			LDX	3	-1 N640	STORE CEXE 3 AT N640	3A140470
				3	N04U	LD CEN6400	3A140490
086E 0 COO	•		LD.				3A140500
086F 0 F00F			EOR		N644 G64C,&-	ZERO WITH /FFFF BRANCH ON ZERO	3A140510
0870 0 4C18			BSI		F000	YR 3 NOT STORED	3A140520
0874 0 30E4			DC	-	/30E4	XR 3 NOT STORED ERR ID	3A140530
0875 0 4400		G64C			F005		3A140540
0877 0 70F2		0040	MDX		A64C	LOOP	3A140550
0878 0 COO4			LD		N643	LD /0000	3A140560
0879 0 DOO!	•		STO		N640	RESTORE N640 TO /0000	3A140570
087A 0 7004		•	MDX		A660	EXIT TO NEXT ROUTINE	3A140580
		N640			/0000	•	3A140590
087B 0 0000 087C 0 0814		N642			K640		3A140600
087D 0 0000		N643			/0000		3A140610
087E 0 FFF1		N644	DC		/FFFF		3A140620
		****	*****	***	********	********	3A140630
******	******	*****	****	***	******	********	
CORE DAT	A OR	*LA-	OPER-				3A140650
ADDR IN	TRUCTION	*BEL	ATION	FT	UPERANDS &	REMARKS IDESEQ# AT RIGHT	3414047A
						**********************	3A140680
087F 0 6100		A660			U O	LD XR 1 WITH /0000 LD XR 2 WITH /0000	3A140690
0880 0 6200			FDX.	2	ň	ID VP 3 HITH /0000	3A140700
0881 0 6300			LDX		Ŭ,	LD XR 1 WITH /FFFF	3A140710
0882 0 61FI			LDX STX		-1 N660	CK FOR DISTRUCTION OF	3A140720
0883 0 6A44 0884 0 CO43			LD 21x	2	N660	OTHER INDEXES	3A140730
0885 0 4C1					G660, &-	BRANCH ON ZERO	3A140740
ひりりつ ひ サヒリ	, UOOA		BSI		F000	XR 2 CHANGED	3A140750
			031	_	/3157		3A140760
0887 0 4400	0F69		DC.			ERR ID	2-2 .0.00
0887 0 4400 0889 0 315	0F69 7	GAAD	DC RS I	,		ERR ID CK LOCK ON ERROR	3A140770
0887 0 4400 0889 0 315 088A 0 4400	0F69 7 0 OF98	G660	BSI	L	F00E	CK LOCK ON ERROR	
0887 0 4400 0889 0 315 0884 0 4400 088C 0 70F	0F69 7 0F98	G66 <b>0</b>	BSI MDX		F00E A660	CK LOCK ON ERROR	3A140770
0887 0 4400 0889 0 315 088A 0 4400 088C 0 70F 088D 0 683	0 0F69 7 0 0F98 2	G660	BSI MDX STX		F00E A660 N660	CK LOCK ON ERROR LOOP	3A140770 3A140780
0887 0 4400 0889 0 315 0884 0 4400 088C 0 70F	0 0F69 7 0 0F98 2 1		BSI MDX STX LD	3	F00E A660 N660 N660	CK LOCK ON ERROR LOOP STORE C%XR 3m AT N660	3A140770 3A140780 3A140790
0887 0 4400 0889 0 315 088A 0 4400 088C 0 70F 088D 0 6830 088E 0 C034	0 0F69 7 0 0F98 2 1		BSI MDX STX LD	3	F00E A660 N660 N660	CK LOCK ON ERROR LOOP STORE C%XR 3m AT N660 LD C%N660m	3A140770 3A140780 3A140790 3A140800

	4400	OFC4	G661	DC BSI	L	/3158 F005	ERR ID CK LOCK ON ERROR	3A1408 3A1408
96 0			*	MDX		A660	LOOP	3A1408
							******	3A1408
97 0			A662	LDX	_	0	LD XR 1 WITH /0000 LD XR 2 WITH /0000	3A1408
98 0				LDX LDX		0	LD XR 3 WITH /0000	3A1408 3A1408
9A 0				LDX	_	-1	LD XR 2 WITH /FFFF	3A1409
9B 0	-			STX		N660	STORE CEXR 1º AT N660	3A1409
9C 0				LD		N660	LD C%N660=	3A1409
9D 0				BSC	L	G662,&-	BRANCH ON ZERO	3A1409
89F 0		0169		BSI DC	L	F000 /3159	XR 1 CHANGED ERR ID	3A1409 3A1409
3A2 0		0F98	G662	BSI	L	FOOE	CK LOCK ON ERROR	3A1409
1A4 0		0. 70		MDX	-	A662	LOOP	3A1409
A5 0				STX	3	N660	STORE CEXR 3 AT N660	3A1409
8A6 0				LD		N660	LD CEN660=	3A1409
3A7 0				BSC ·	_	G663,&-	BRANCH ON ZERO	3A1410
BAS O		0169		BSI DC	L	F000 /315A	CK LOCK ON ERROR ERR ID	3A1410
SAC O		OFC4	G663	8S I	L	F005	CK LOCK ON ERROR	3A1410 3A1410
AE O		0,04	0003	MDX	•	A662	LOOP	3A1410
			****	****	***	*******	******	3A1410
AF O			A664	LDX	_	0	CK DISTRUCTION OF	3A1410
BO O				LDX		0	OTHER INDEXES	3A1410
81 0				LDX	_	0	XROS HAVE /0000	3A1410
B2 0				LDX STX	-	-1 N660	LD XR 3 WITH /FFFF STORE C\$XR 1 AT N660	3A1410 3A1411
84 0	-			LD	•	N660	LD C\$N660B	3A1411
	4C18	OBBA		BSC	L	G664, &-	BRANCH ON ZERO	3A1411
87 0				BSI	Ĺ	F000	XR 1 CHANGED	3A1411
89 0				DC		/315B	ERR ID	3A1411
BA O		0F98	G664	BSI	L	FOOE	CK LOCK ON ERROR	3A1411
BC O				MDX STX	,	A664 N660	LODP Store C\$XR 2m at N660	3A1411 3A1411
BE O				LD	2	N660	LD CEN6600	3A1411
BF 0		08C4		BSC	L	G665,&-	BRANCH ON ZERO	3A1411
3C1 0	4400	0F69		BSI	L	F000	XR 2 CHANGED	3A1412
3C3 0				DC		/315C	ERR ID	3A1412
1C4 0		OFC4	G665	BSI	L	F005	CK LOCK ON ERROR	3A1412
3C6 0 3C7 0				MDX		A664	LOOP	3A1412
308 0			N660	MDX DC		A670 0	EXIT TO NEXT ROUTINE	3A1412 3A1412
	0000				***	-	******	3A1412
309 0	6110		A670	LDX	1	16	LD XR 1 WITH /0010	3A1412
BCA O				LD		N670	LOAD ONE	3A1412
CB O		08D4	G671	BSC	L	G670,E-	NOT BR FOR CORRECT OP	3A1412
CD O			G672	SLA	,	1,	_1 EDOM CEVO 1m	3A1413
CF 0				MDX		-1 G671	-1 FROM CXXR 1m	3A1413 3A1413
	4400	OFC4		BSI	L		CK LOCK ON ERROR	3A1413
3D2 O		<del>.</del> ,		MDX	-	A670	LOOP	3A1413
D3 0				MDX		A680	EXIT TO NEXT ROUTINE	3A1413
	4400	0F69	G670	BSI	L	F000	WRONG DECODE OF ZERO ACC	3A1413
3D6 0	3169 4400	0500		DC		/3169	ERR ID	3A1413
3D9 0		UFYB		BSI MDX	L	F00E A670	CK LOCK ON ERROR	3A1413
SDA O				MDX		G672	LOOP	3A1413 3A1414
DB O			N670	DC		1		3A1414
			*	-				3A1414
			*			TEST	OF ADD OPERATION	3A1414
			*					3A1414
***	****	****	****	****	***	*******	**********************	3A1414
OR E		A CR	*LA-				*********	3A1414 3A1414

08DC 0 2002	A 680	LDS		2	SET LARRY ON	3A141500
08DD 0 CO6E		LD		N680	LD /FFFF	3A141510
08DE 0 806E		A		N681	A /0000	3A141520
08DF 0 4C01 08E2		BSC	L		CK FOR OVERFLOW ON	3A141530
08E1 0 7003		MDX	_	H680	OVERFLOW IS OFF	3A141540
08E2 0 4400 0F69	G680	BSI	L		OVERFLOW IS ON	3A141550
08E4 0 30E5		DC	_	/30E5	ERR ID	3A141560
08E5 0 4400 0F98	H680	BSI	L		CK LOCK ON ERROR	3A141570
08E7 0 70F4		MDX	-	A680	LOGP	3A141580
08E8 0 F063		EDR		N680	CK IF ADD ZERO	3A141590
08E9 0 4C18 08EE		BSC	L		* CHANGED ACC	3A141600
08EB 0 4400 0F69		BSI		F000	ADD 1 AND 0 FAILED	3A141610
08ED 0 30E6		DC.	_	/30E6	ERR ID	
08EE 0 4400 OFC4	G682			F005	CK LOCK ON ERROR	3A141620 3A141630
08F0 0 70EB	0002	MDX	-	A680	LOOP	3A141640
	****		***		******	
08F1 0 2000	A684			0	SET C AND OF OFF	3A141650
08F2 0 C059		LD		N680	LD /FFFF	3A141660 3A141670
08F3 0 805A		Ā		N682	A /G001	3A141680
08F4 0 4C02 08F9		BSC		G684,C	CK IF CARRY DCCURED	3A141690
08F6 0 4400 0F69		BSI		F000	CARRY NOT ON	3A141700
08F8 0 30E7		DC	-	/30E7	ERR ID	3A141710
08F9 0 4400 0F98	G684			FOOE	CK LOCK ON ERROR	3A141720
08FB 0 70F5		MDX	•	A684	LOOP	3A141730
08FC 0 4C18 0901		BSC		G686, &-	BRANCH ON ZERO	3A141740
08FE 0 4400 0F69		BSI			ADD FFFF&0001 FAILED	
0900 0 30E8		DC	_	/30E8	ERR ID	3A141750 3A141760
0901 0 4400 OFC4	G686		L			
0903 0 70ED	9000	MDX	L	A684	CK LOCK ON ERROR LOOP	3A141770 3A141780
0.000	****		***		******	3A141790
0904 0 2000	A688			0	SET C AND OF OFF	3A141800
0905 0 C046	-000	LD		N680	LD /FFFF	3A141810
0906 0 8045		A		N680	A /FFFF	3A141820
0907 0 4C02 090C		BSC	L	-	BR ON CARRY	3A141830
0909 0 4400 0F69		BSI		F000	CARRY NOT ON	3A141840
090R 0 30F9		DC	_	/3050		
0908 0 30E9 0900 0 4400 0E98	GARR	DC BST		/30E9	ERR ID	3A141850
090C 0 44C0 0F98	G688	BSI		FOOE	ERR ID CK LOCK ON ERROR	3A141850 3A141860
090C 0 44C0 0F98 090E 0 70F5	G688	BSI MDX		F00E A688	ERR ID CK LOCK ON ERROR LOOP	3A141850 3A141860 3A141870
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042	G688	BSI MDX EOR	L	F00E A688 N687	ERR ID CK LOCK ON ERROR LOOP	3A141850 3A141860 3A141870 3A141880
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915	G688	BSI MDX EOR BSC	L	F00E A688 N687 G68A,&-	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFFF BRANCH ON ZERO	3A141850 3A141860 3A141870 3A141880 3A141890
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69	G688	BSI MDX EOR BSC BSI	L	F00E A688 N687 G68A,&- F000	ERR ID CK LOCK ON ERROR LOOP ZERO WITH /FFFF BRANCH ON ZERO ADD FFFF&FFFF FAILED	3A141850 3A141860 3A141870 3A141880 3A141890 3A141900
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA		BSI MDX EOR BSC BSI DC	L	F00E A688 N687 G68A,&- F000 /30FA	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFFF BRANCH ON ZERO ADD FFFF&FFFF FAILED ERR ID	3A141850 3A141860 3A141870 3A141880 3A141890 3A141900 3A141910
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4	G688 G68A	BSI MDX EOR BSC BSI DC BSI	L	F00E A688 N687 G68A.&- F000 /30FA F005	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFFF BRANCH ON ZERO ADD FFFFGFFFF FAILED ERR ID CK LOCK ON ERROR	3A141850 3A141860 3A141870 3A141880 3A141890 3A141900 3A141910 3A141920
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA	G68A	BSI MDX EOR BSC BSI DC BSI MDX	L L L	FOOE A688 N687 G68A+&- FOOO /30FA FOO5 A688	ERR ID CK LOCK ON ERROR LOOP ZERO WITH /FFFF BRANCH ON ZERO ADD FFFFFFFFF FAILED ERR ID CK LOCK ON ERROR LOOP	3A141850 3A141860 3A141870 3A141880 3A141890 3A141900 3A141910 3A141920 3A141930
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC	G68A	BSI MDX EOR BSC BSI DC BSI MDX	L L L	F00E A688 N687 G68A,&- F000 /30FA F005 A688	ERR ID CK LOCK ON ERROR LOOP ZERO WITH /FFFF BRANCH ON ZERO ADD FFFFFFFFFF FAILED ERR ID CK LOCK ON ERROR LOOP	3A141850 3A141860 3A141880 3A141880 3A141890 3A141900 3A141910 3A141920 3A141930 3A141940
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC	G68A	BSI MDX EOR BSC BSI DC BSI MDX *****	L L L	FOOE A688 N687 G68A,&- FOOO /30FA FOO5 A688	ERR ID CK LOCK ON ERROR LODP ZERO WITH /FFFF BRANCH ON ZERO ADD FFFF&FFFF FAILED ERR ID CK LOCK ON ERROR LOOP SET C AND OF OFF	3A141850 3A141860 3A141870 3A141880 3A141890 3A141910 3A141920 3A141920 3A141930 3A141940 3A141950
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC	G68A	BSI MDX EOR BSC BSI DC BSI MDX ******	L L L	F00E A688 N687 G68A.C- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFFF BRANCH ON ZERO ADD FFFFEFFFF FAILED ERR ID CK LOCK ON ERROR LOOP SET C AND OF OFF LD /4000	3A141850 3A141860 3A141880 3A141880 3A141990 3A141910 3A141920 3A141930 3A141940 3A141940 3A141960
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034	G68A	BSI MDX EOR BSC BSI DC BSI MDX ****** LDS LD	L L L	F00E A688 N687 G68A.&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFF BRANCH ON ZERO ADD FFFF&FFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141880 3A141880 3A141990 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141970
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920	G68A	BSI MDX EOR BSC BSI DC BSI MDX ***** LDS LD A BSC	L L L	F00E A688 N687 G688.6- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFF BRANCH ON ZERO ADD FFFF&FFF FAILED ERR ID CK LOCK ON ERROR LOOP SET C AND OF OFF LD /4000 A /4000 BR IF OF NOT ON	3A141850 3A141860 3A141880 3A141890 3A141990 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141970 3A141980
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 0918 0 8034 0918 0 4C01 0920 091D 0 4400 0F69	G68A	BSI MDX EOR BSC BSI DC BSI MDX ****** LDS LD A BSC BSI	L L L	F00E A688 N687 G68A,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERO WITH /FFFF BRANCH ON ZERO ADD FFFFGFFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141880 3A141890 3A141990 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141980 3A141990
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB	G68A ***** A68C	BSI MDX EOR BSC BSI DC BSI MDX ****** LDS LD A BSC BSI DC	L L L ***	F00E A688 N687 G68A,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERO WITH /FFFF BRANCH ON ZERO ADD FFFFFFFFFF FAILED ERR ID CK LOCK ON ERROR LOOP SET C AND OF OFF LD /4000 A /4000 BR IF OF NOT ON OVERFLOW NOT ON ERR ID	3A141850 3A141860 3A141870 3A141880 3A141890 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141970 3A141980 3A141990 3A142000
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 0918 0 4C01 0920 091B 0 4C01 0920 091B 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98	G68A	BSI MDX EOR BSC BSI DC BSI MDX ***** LDS LD A BSC BSI DC BSI	L L L	F00E A688 N687 G68A,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141880 3A141880 3A141890 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141980 3A141980 3A141990 3A142000 3A142010
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 0918 0 8034 0918 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98	G68A ***** A68C	BSI MDX EOR BSC BSI DC BSI MDX ***** LDS LD A BSC BSI DC BSI MDX	L L L ***	F00E A688 N687 G68A,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERD WITH /FFF BRANCH ON ZERD ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141880 3A141880 3A141990 3A141910 3A141920 3A141930 3A141940 3A141960 3A141960 3A141970 3A141990 3A142000 3A142000 3A142000
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5	G68A ***** A68C	BSI MDX EOR BSC BSI DC BSI MDX ***** LDS LD A BSC BSI DC BSI DC BSI DC		F00E A688 N687 G68A.&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141880 3A141880 3A141990 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141970 3A141990 3A142000 3A142000 3A142010 3A142030
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C	G68A ***** A68C	BSI MDX EOR BSC BSI DC BSI MDX ***** LDS LD A BSC BSI DC BSI DC BSI BSI BC BSI BC BSI BSI BC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		F00E A688 N687 G688.6- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LOOP ZERO WITH /FFF BRANCH ON ZERO ADD FFFF&FFFF FAILED ERR ID CK LOCK ON ERROR LOOP SET C AND OF OFF LD /4000 A /4000 BR IF OF NOT ON OVERFLOW NOT ON ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8000 BRANCH ON ZERO	3A141850 3A141860 3A141880 3A141890 3A141990 3A141910 3A141920 3A141940 3A141950 3A141960 3A141970 3A141990 3A142000 3A142000 3A142010 3A142020 3A142030 3A142040
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69	G68A ***** A68C	BSI MDX EOR BSC BSI DC BSI MDX ***** LDS LD A BSC BSI DC BSI MDX BSC BSI DC BSI MDX BSC BSI DC BSI		F00E A688 N687 G688,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERO WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141870 3A141880 3A141890 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141970 3A141980 3A142000 3A142000 3A142000 3A142010 3A142030 3A142030 3A142030
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091B 0 4C01 0920 091B 0 30EB 0920 0 4400 0F69 0925 0 70F5 0923 0 F02C 0924 0 4C18 0929 0928 0 30EC	G68A ***** A68C	BSI MDX EDR BSC BSI MDX ***** LDS A BSC BSI MDX EOR BSI MDX EOR BSI DC		F00E A688 N687 G68A,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERD WITH /FFFF BRANCH ON ZERO ADD FFFFEFFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141880 3A141880 3A141890 3A141910 3A141920 3A141930 3A141950 3A141960 3A141980 3A141980 3A142000 3A142000 3A142000 3A142030 3A142050 3A142050
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0928 0 30EC 0929 0 4400 0FC4	G68A ***** A68C	BSI MDX EDR BSC BSI MDX ***** LDS A BSC BSI DC BSI MDX EOR BSC BSI BSC BSI BSC BSI BSC BSI BSC BSI BSI BSC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		F00E A688 N687 G68A.&- F000 /30FA F005 A688 ***********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP  SET C AND OF OFF LD /4000 A /4000 BR IF OF NOT ON OVERFLOW NOT ON ERR ID CK LOCK ON ERROR LOOP ZERO WITH /8000 BRANCH ON ZERO ADD 4000&4000 FAILED ERR ID CK LOCK ON ERROR	3A141850 3A141860 3A141880 3A141880 3A141890 3A141910 3A141920 3A141930 3A141940 3A141950 3A141960 3A141980 3A141990 3A142000 3A142020 3A142030 3A142040 3A142050 3A142050 3A142050 3A142050 3A142050
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090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0FC4 0928 0 70EC	G68A ***** A68C  G68C	BSI MDX EOR BSI DC BSI MDX ***** LDS LD A BSC BSI DC BSI MDX BSC BSI DC BSI MDX BSC BSI DC BSI MDX BSC BSI DC BSI MDX BSC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		F00E A688 N687 G688.&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERO WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141870 3A141880 3A141890 3A141990 3A141910 3A141920 3A141940 3A141950 3A141970 3A141970 3A142000
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091B 0 4C01 0920 091B 0 30EB 0920 0 4400 0F69 0921 0 70F5 0923 0 F02C 0924 0 4C18 0929 0928 0 30EC 0929 0 4400 0F69 0928 0 30EC	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSC BSI MDX ***** LDS A BSC BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI EOR BSI EOR BSI EOR BSI EOR EOR EOR EOR EOR EOR EOR EOR EOR EOR		FOOE A688 N687 G68A,&- FOOO /30FA FOO5 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERD WITH /FFF BRANCH ON ZERD ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141870 3A141880 3A141890 3A141990 3A141910 3A141920 3A141930 3A141950 3A141960 3A141980 3A141980 3A142000
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F69 0925 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0FC4 0928 0 70EC	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSC BSI MDX ***** LDS A BSC BSI MDX EOR BSI MDX EOR BSI MDX EOR BSI MDX EDS LD BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS BSI MDX EDS EDS EDS EDS EDS EDS EDS EDS EDS EDS		F00E A688 N687 G68A.&- F000 /30FA F005 A688 ***********************************	ERR ID CK LOCK ON ERROR LOOP ZERD WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP  *********************************	3A141850 3A141860 3A141870 3A141880 3A141880 3A141890 3A141910 3A141910 3A141930 3A141950 3A141960 3A141960 3A141970 3A141980 3A142000 3A142100 3A142100 3A142100
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC  0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0F69 0928 0 30EC 0929 0 4400 0F69 0928 0 30EC 0929 0 4400 0FC4 0928 0 70EC	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSI DC BSI MDX ***** LDS A BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		F00E A688 N687 G68A,&- F000 /30FA F005 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERD WITH /FFF BRANCH ON ZERD ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LODP ************************************	3A141850 3A141860 3A141880 3A141880 3A141890 3A141990 3A141910 3A141920 3A141940 3A141940 3A141960 3A141970 3A141990 3A142000 3A142100 3A142100 3A142100 3A142100 3A142100 3A1421100 3A142120
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F69 091F 0 30EB 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0FC4 0928 0 70EC	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSCI BSI MDX ***** LDS A BSCI BSI DC BSI DC BS		F00E A688 N687 G68A.&- F000 /30FA F005 A688 ***********************************	ERR ID CK LOCK ON ERROR LODP ZERD WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LODP ************************************	3A141850 3A141860 3A141880 3A141880 3A141890 3A141990 3A141990 3A141990 3A141940 3A141960 3A141970 3A141990 3A141990 3A142000 3A142100
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0F64 0928 0 70EC	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSC BSI MDX ***** LDS LD A BSC BSI DC BSI DC BSI BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		F00E A688 N687 G688,&- F000 /30FA F005 A688 ***********************************	ERR ID CK LOCK ON ERROR LODP ZERO WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141870 3A141880 3A141890 3A141990 3A141910 3A141920 3A141940 3A141950 3A141960 3A141970 3A141980 3A142000 3A142100 3A142100 3A142110 3A142110 3A142110 3A142110
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F69 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0F69 0928 0 70EC 0920 0 C022 0920 0 C022 0920 0 C022 0920 0 4C18 0935 0932 0 4400 0F69 0934 0 30ED	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSI DC BSI MDX **** LD A BSI BSI BSI BSI BSI BSI DC BSI MDX EOR BSI DC BSI MDX EOR BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		FOOE A688 N687 G68A.&- FOOO /30FA FOO5 A688 **********************************	ERR ID CK LOCK ON ERROR LODP ZERD WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141870 3A141880 3A141890 3A141990 3A141910 3A141930 3A141950 3A141950 3A141960 3A141970 3A141980 3A142000 3A142000 3A142000 3A142000 3A142000 3A142010 3A142100 3A142100 3A142100 3A142100 3A142110 3A142120 3A142120 3A142120 3A142120 3A142120
090C 0 44C0 0F98 090E 0 70F5 090F 0 F042 0910 0 4C18 0915 0912 0 4400 0F69 0914 0 30FA 0915 0 4400 0FC4 0917 0 70EC 0918 0 2000 0919 0 C035 091A 0 8034 091B 0 4C01 0920 091D 0 4400 0F69 091F 0 30EB 0920 0 4400 0F98 0922 0 70F5 0923 0 F02C 0924 0 4C18 0929 0926 0 4400 0F69 0928 0 30EC 0929 0 4400 0F64 0928 0 70EC	G68A ***** A68C  G68C  G68E *****	BSI MDX EDR BSC BSI MDX ***** LDS LD A BSC BSI DC BSI DC BSI BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		F00E A688 N687 G688,&- F000 /30FA F005 A688 ***********************************	ERR ID CK LOCK ON ERROR LODP ZERO WITH /FFF BRANCH ON ZERO ADD FFFFEFFF FAILED ERR ID CK LOCK ON ERROR LOOP **********************************	3A141850 3A141860 3A141870 3A141880 3A141890 3A141990 3A141910 3A141920 3A141940 3A141950 3A141960 3A141970 3A141980 3A142000 3A142100 3A142150

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PROG ID 03A1-1

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PAGE

CPU FUNCTION TEST

DATE

EC NO.

0937 0 70F4 MDX 8680 LGGP 0938 0 CO1A LD N688 LD C AND OF COND	3A142180 3A142190
LO C AND DE COND	
DOZE D COLA TO THE MORE LU C AND OF COMP	
0756 U CUIA 7500 HITH /0003	3A142200
0757 0 F011	3A142210
UTIA U TOTO UTTO	3A142220
0750 0 4004 0745	3×142230
093E 0 4400 0F69 BSI L F000 CARRY NOT ON	
0940 0 30EF DC /30EF ERR ID	3A142240
0941 0 4400 OFC4 BSI L FOO5 CK LCCK ON ERROR	3A142250
0943'0 70E8 MDX B680 LOOP	3A142260
TO ALEXT DOUTIN	IE 3A142270
0744 0 1007	3A142280
0,77, 0 7,700 0.0.	3A142290
OTAT O SOLE	
0948 0 4400 OFC4 J682 BSI L F005 CK LOCK ON ERROR	3A142310
094A 0 70E1 MDX 8680 LOOP	
0948 0 7008 MDX A6CO EXIT TO NEXT ROUTIN	
094C 0 FFFF N680 DC /FFFF	34142330
094D 0 0000 N681 DC /0000	3A142340
094E 0 0001 N682 DC /0001	3A142350
	3A142360
0,11	3A142370
0950 0 8000 N684 DC /8G30	3A142380
0951 0 0003 N686 DC /0003	3A142390
0952 O FFFE N687 DC /FFFE	
0953 0 0000 N688 DC /0000 STORAGE	3A142400
	3A142410
# INDEXING TEST	3A142420
*****************	** 3A142440
******************	****** 3A142450
	3A142460
TOURS OF THE PROPERTY OF THE PARTY OF THE PA	
ADDR INSTRUCTION *BEL ATION FT UPERANUS & REMARKS 1063549 ************************************	******* 34142480
- ·	3A142490
0954 0 61FC A6CO LDX 1 -4 LD XR 1 WITH -4	3A142470
0955 0 C500 09D0 LD L1 N6C4 LD CEN6C4EXR 1	3A142500
0957 0 F074 EOR N6CO ZERO ACC IF CORREC	
0958 0 4C20 0966 BSC L H6CO, Z BR IF NOT ZERO	3A142520
095A 0 697A STX 1 N6C9 STORE CXXR 1 AT N	6C9 3A142530
0958 0 C079 LD N6C9 GET XR 1 VALUE	3A142540
095C 0 F079 EOR N6CA ZERO ACC IF CORREC	T 3A142550
DOLLING ON TERM	3A142560
0750 0 4010 0707	3A142570
0751 0 4400 0107	3A142580
0,01 0 30.0	
0962 0 4400 OFC4 BSI L F005 CK LOCK ON ERROR	3A142600
0964 0 70EF MDX A6CO LOOP	
0965 0 7006 MDX A6C2 EXIT TO NEXT ROUT!	
0966 0 4400 0F69 H6CO BSI L F000 WRONG LOCATION	
0968 0 30F1 DC /30F1 ERR ID	3A142630
0969 0 4400 OFC4 G6CO BSI L F005 CK LOCK ON ERROR	3A142640
096B 0 70E8 MDX A6CO LOOP	3A142650
****************	*** 3A142660
	3A142670
0700 0 0204	3A142680
0,000 0 0000 0,00	• •
0701 0 1004	3A142700
0970 0 4C20 097E BSC L H6C2+Z BR IF NOT ZERO	
0972 0 6A62 STX 2 N6C9 STORE XR 2 AT N6C9	
0973 0 CO61 LD N6C9 GET XR 2 VALUE	3A142720
0974 0 F062 EOR N6CB ZERO ACC 1F CORREC	T 3A142730
0975 0 4C18 0981 BSC L G6C2+E- BRANCH ON Z RD	3A142740
0977 0 4400 0F69 BSI L F000 XR 2 LOADED WRONG	3A142750
0479 0 30F2 DC /30F2 ERR 1D	3A142760
	3A142770
0712 0 4400 0164	3A142780
097C 0 70EF MDX A6C2 LOOP	
097D 0 7006 MDX A6C4 EXIT TO NEXT ROUT	
097E 0 4400 0F69 H6C2 BSI L F000 WRONG LOCATION	3A142800
0980 0 30F3 DC /30F3 ERR ID	3A142810
0981 0 4400 OFC4 G6C2 BSI L F005 CK LOCK ON ERROR	3A142820
0983 0 70E8 MDX A6C2 LOOP	3A142830
*****************	*** 3A142840
0984 0 6300 A6C4 LDX 3 0 SET XR 3 TO ZERO	3A142850

0985 0 C700 09D0	LD	L3 N6C4	LD C\$N6C4&XR 3#	3A142860
0987 O F048	EOR	N6C4	ZERO ACC IF CURRECT	3A142870
0988 0 4020 0995	BSC	L H6C4.Z	BR IF NOT ZERO	3A142880
098A 0 684A	STX	3 N6C9	STORE XR 3 AT N6C9	3A142890
	LD	N6C9	LD /0000	3A142900
098B 0 C049	BSC	L 66C4.8-	BRANCH DN ZERO	3A142910
0980 0 4010 0998			XR 3 LOADED WRONG	3A142920
098E 0 4400 0F69	BS1	L F000	ERR ID	3A142930
0990 0 30F4	DC	/30F4		3A142940
0991 0 4400 OFC4	BSI	L F005	CK LOCK ON ERROR	3A142950
0993 0 70F0	MDX	A6C4	LOOP	3A142960
0994 0 7006	MDX		EXIT TO NEXT ROUTINE	
0995 0 4400 OF69	H6C4 BSI	L F000	WRONG LOCATION	3A142970
0997 0 30F5	DC	/30F5	ERR ID	3A142980
0998 0 4400 OFC4	G6C4 BSI	L F005	CK LUCK ON ERROR	3A142990
099A 0 70E9	MDX	A6C4	LOOP	3A143000
	*******	**********	******	3A143010
0998 0 6301	A6C6 LDX	3 1	SET XR 3 TO &1	3A143020
099C 0 C700 09D0	LD	L3 N6C4	LD CEN6C4EXR 30	3A143030
099E 0 F032	EDR		ZERO FOR CORRECT OF	3A143040
	BSC		BR IF NOT ZERO	3A143050
099F 0 4C20 09AD		-	STORE XR 3 AT N6C9	3A143060
09A1 0 6B33	STX		LD C\$N6C9B	3A143070
09A2 0 C032	LD	N6C9	ZERO ACC FOR CORRECT OP	
09A3 0 F034	EOR			3A143090
09A4 0 4C18 09B0	BSC		BRANCH ON ZERO	
09A6 0 4400 0F69	BSI	L F000	XR 3 LOADED WRONG	3A143100
09AB 0 30F6	DC	/30F6	ERR ID	3A143110
09A9 0 4400 OFC4	851	L F005	CK LOCK ON ERROR	3A143120
09AB 0 70EF	MDX	A6C6	LOOP	3A143130
09AC 0 7006	MDX	46C8	EXIT TO NEXT ROUTINE	3A143140
09AD 0 4400 0F69	H6C6 B51	L F000	WRONG LOCATION	3A143150
09AF 0 30F7	DC	/30F7	ERR ID	3A143160
0980 0 4400 OFC4	G6C6 BS1		CK LOCK ON ERROR	3A143170
	MD		LOOP	3A143180
0982 0 70E8			******	3A143190
			SET XR 3 TO -1	3A143200
09B3 0 63FF	A6C8 LD	·	LD CEN6CFEXR 3D	3A143210
0984 0 C780 09DA	LD		=	3A143220
0986 O F019	EO		ACC NOW ZERO	3A143230
0987 0 4C20 09C5	BSC		BR IF NOT ZERO	3A143240
09B9 0 6B1B	ST		STORE XR 3 AT N6C9	3A143250
O9BA O CO1A	LD	N6C9	LD CEN6C9m	
0988 O F01E	EO	R N6CF	ZERO WITH /FFFF	3A143260
09BC 0 4C18 09C8	BS	: L G6C8,&-	BRANCH ON ZERO	3A143270
09BE 0 4400 0F69	BS	I L F000	XR 3-LOADED WRONG	3A143280
09C0 0 30F8	DC		ERR ID	3A143290
09C1 0 4400 OFC4	85		CK LOCK ON ERROR	3A143300
09C3 0 70EF	MD.		LOOP	3A143310
0964 0 7017	MD		EXIT TO NEXT ROUTINE	3A143320
			WRONG LOCATION	3A143330
09C5 0 4400 0F69	H6C8 BS		FRR ID	3A143340
09C7 0 30F9	DC G6C8 BS		CK LOCK ON ERROR	3A143350
09C8 0 4400 OFC4		•	LOOP	3A143360
09CA 0 70E8	MD		EXIT TO NEXT ROUTINE	3A143370
09CB 0 7010	MD		ENTI TO MENT MONTHS	3A143380
09CC 0 09CC	N6CO DC			3A143390
09CD 0 09CD	N6C1 DC	N6C1		3A143400
09CE 0 09CE	NLC2 DC			3A143410
09CF 0 09CF	N6C3 DC			3A143420
09D0 0 09D0	N6C4 DC	N6C4		-
09D1 0 09D1	N6C5 DC			3A143430 3A143440
09D2 0 09D2	N6C6 DC			
09D3 0 09D3	N6C7 DC	N6C7		3A143450
09D4 0 09D4	N6C8 DC			3A143460
09D5 0 0000	N6C9 DC			3A143470
09D6 0 FFFC	N6CA DC			3A143480
	N6CB DC			3A143490
09D7 0 0004	NOCE DO			3A143500
09D8 0 0001				3A143510
0909 0 0900	DC			3A143520
OPDA O FFFF	N6CF DC		LOOP	3A143530
09DB 0 70D7	MD	x A6C8	<b>2001</b>	

34143540 ************** 3A143560 DATA DR *LA- OPER-CORE INSTRUCTION *BEL ATION FT OPERANDS & REMARKS ID&SEQ# AT RIGHT 3A143570 3A143590 LD XR 1 WITH ADDRESS 09DC 0 6500 09CD A6DO LDX L1 N6C1 3A143600 * OF N6C1 09DE 0 C1FF 1 -1 SHORT FORM INDEXING 3A143610 LD ZERO IF CORRECT 3A143620 E OR N6C0 OODF O FOEC BRANCH ON ZERO 3A143630 BSC L H6D0,&-09E0 0 4C18 09E5 INDEXED LD INST. FAILED 3A143640 09E2 0 4400 0F69 BSI L FOOO 3A143650 09E4 0 315D /3150 ERR ID BSI L FOOS CK LOCK ON ERROR 3A143660 09E5 0 4400 0FC4 H6D0 . WEDO LOOP 3A143670 09E7 0 70F4 MDX ***************************** 3A143680 LD XR 2 WITH ADDRESS 3A143690 A6D2 LDX L2 N6C1 09E8 0 6600 09CD 3A143700 # DE NACI LD CEOF ADDRESS IN XR 1610 3A143710 2 1 09EA 0 C201 ZERO IF CORRECT 3A143720 EOR N6C2 09EB 0 F0E2 BRANCH ON ZERO 3A143730 09EC 0 4C18 09F1 BSC L H6D2,&-BSI L FOOO INDEXED LD INST. FAILED 09EE 0 4400 0F69 3A143740 3A143750 FRR ID 09F0 0 315E /315E CK LOCK ON ERROR 3A143760 09F1 0 4400 0FC4 H6D2 BSI L F005 34143770 09F3 0 70F4 MDX A6D2 LOOP 3A143780 **************** ********* LD XR 3 WITH ADD DF N6C1 3A143790 09F4 0 6700 09CD A6D3 LDX L3 N6C1 LD CXOF ADD IN XR 3 & OF 3A143800 3 0 09F6 0 C300 LD 7FRO IF CORRECT 3A143810 09F7 0 F0D5 EOR N6C1 3A143820 BRANCH ON ZERO 09F8 0 4C18 09FD BSC L H6D3, &-INDEXED LD INST. FAILED 3A143830 09FA 0 4400 0F69 BSI L FOOO 3A143840 09FC 0 315F DC /315F ERR ID CK LOCK ON ERROR 3A143850 09FD 0 4400 0FC4 H6D3 BSI L F005 3A143860 LOOP 09FF 0 70F4 MDX A6D3 **************** 3A143870 ************* 34143880 3A143890 A6D5 LDX 1 2 LD XR 1 WITH &2 0A00 0 6102 LD /0001 3A143900 LD N6CD 0A01 0 C0D6 3A143910 1 1 NOW A#/0004 0A02 0 1101 SLA N6CB 3A143920 NOW A#/0000 0A03 0 F0D3 EOR 34143930 BSC L H6D5,&-BRANCH ON ZERO 0A04 0 4C18 0A09 0A06 0 4400 0F69 BSI L FOOO INDEXED SLA FAILED 3A143940 /3163 ERR ID 3A143950 **0A08 0 3163** DC 3A143960 H6D5 CK LOCK ON ERROR 0A09 0 4400 0FC4 BSI L FOOS 3A143970 LOOP 0A0B 0 70F4 MDX A6D5 ************* 34143980 LD /00004 34143990 **OACC 0 6202** A6D6 LDX 22 NOW A#/0001 3A144000 DAOD O COC9 LD N6CB ZERO ACC 3A144010 SRA 2 1 **DADE 0 1A01** N6CD ZERO WITH /0001 3A144020 DAOF O FOC8 FOR 3A144030 BRANCH ON ZERO BSC L #606.&-OA10 0 4C18 0A15 BSI L FOOO INDEXED SRA FAILED 3A144040 OA12 0 4400 0F69 3A144050 DC /3164 ERR ID OA14 0 3164 CK LOCK ON ERROR OA15 0 4400 OFC4 L F005 3A144060 BSI LOOP 3A144070 **OA17 0 70F4** MDX A6D6 3A144080 ************ 3A144090 TEST INDEXED BSC 34144100 3A144110 CORE DATA OR *LA- OPER-INSTRUCTION *BEL ATION FT OPERANDS & REMARKS | ID&SEQ# AT RIGHT 3A144140 ADDR A6F0 LDX 3 1 LD XR 3 WITH &1 34144160 OA18 0 6301 OA19 0 COOE LD N6F1 LD CTOF LABEL N6F1m 3A144170 OA1A 0 4F30 OA1D BSC L3 N6F0 BR TO C%N6FOEXR 3P 3A144180 INDEXED BSC FAILED 3A144190 OA1C 0 3000 WAIT INDEXED BSC FAILED 3A144200 OA1D 0 3000 N6FO WAIT N6F1 CK FOR DISTROYED ACC 3A144210 **GA1E 0 F009** EOR

0A1F 0 4C18 0A24	0A50 0 C04 0A51 0 905			LD S		N700 N703	LD /0000 S`/FFFF	3A144660 3A144670
0A21 0 4400 0F69 0A23 0 3165 0C /3165 ERR ID 3A144220 0A24 0 4400 0FC4 0A26 0 70F1 0A28 0 0A28 0A6F1 0A27 0 7001 0A28 0 0A28 0A6F1 0A27 0 6201 0A27 0 6201 0A28 0 0A28 0A27 0 7005 0A28 0 0A28 0A28 0 0A29 0A29 0 0A29 0A28 0 0A29 0A29 0 0A29 0 0A29 0 0A29 0A29 0 0A			A704			-	-	
0A21 0 4400 0F69				****	***	*******	*******	3A144640
0A21 0 4400 0F69			6702		L			
0A21 0 4400 0F69			C707					
0A21 0 4400 0F69	0A49 0 440	0 0F69		BSI		F000	CARRY NOT ON	3A144600
0A21 0 4400 0F69					L			
0A21 0 4400 0F69								
0A21 0 4400 0F69								
0A21 0 4400 0F69	0A42 0 440	0 0F98	G700	BSI	L	F O O E	CK LOCK ON ERROR	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
0A21 0 4400 0F69					-			
0A21 0 4400 0F69								
0A21 0 4400 0F69							<del>-</del>	
0A21 0 4400 0F69		_						
0A21 0 4400 0F69								
0A21 0 4400 0F69 0A23 0 3165         BSI L F000 ACC DISTROYED         3A144230 ACC DISTROYED         3A144240 ACC DISTROYED         3A144250 ACC DISTROYED         3A144250 ACC DISTROYED         3A144250 ACC DISTROYED         3A144250 ACC DISTROYED         3A144260 ACC DISTROYED         3A144280 ACC DISTROYED         3A144280 ACC DISTROYED         3A14430 ACC DISTROYED         3A14430 ACC DISTROYED         3A14430 ACC DISTROYED         3A14430 ACC DISTROYED         3A144360 ACC DISTRO		-					<del>-</del>	
0A21 0 4400 0F69	0A38 0 200	0						
0A21 0 4400 0F69 0A23 0 3165         BSI L F000 ACC DISTROYED         3A144230           0A23 0 3165 DC /3165 ERR ID         3A144240           0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR         3A144250           0A26 0 70F1 MDX A6F0 LOOP         3A144260           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE         3A144270           0A28 0 0A28 N6F1 DC N6F1         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH £1 3A144290         3A144280           0A2A 0 4E80 0A2D BSC 12 N6F2 BR TO N6F2£1 INDIRECT         3A144310           0A2C 0 7005 MDX H6F1 BSC FAILED         3A144320           0A2D 0 7004 N6F2 MDX H6F1 BSC FAILED         3A144330           0A2E 0 0A31 DC N6F3         3A144360           0A2F 0 7002 MDX H6F1 BSC FAILED         3A144360           0A31 0 7003 N6F3 MDX H6F1 BSC FAILED         3A144360           0A31 0 7003 N6F3 MDX H6F2 BSI L F000 BSC DID NOT BRANCH         3A144370           0A32 0 4400 0F69 H6F1 BSI L F000 BSC DID NOT BRANCH         3A144380           0A35 0 4400 0F64 MGP BSI L F005 CK LOCK ON ERROR         3A144390           0A35 0 4400 0F64 MDX A6F1 LODP         3A144440           ************************************				****	***	*******	******	
0A21 0 4400 0F69 0A23 0 3165         BSI L F000 ACC DISTROYED         3A144230 ACC DISTROYED         3A144230 ACC DISTROYED         3A144230 ACC DISTROYED         3A144230 ACC DISTROYED         3A144240 ACC DISTROYED         3A144240 ACC DISTROYED         3A144260 ACC DISTROYED         3A14430 ACC DISTROYED         3A14430 ACC DISTROYED         3A144360 ACC DIST		•				TEST	OF SUBTRACT OPERATION	
0A21 0 4400 0F69         BSI L F000 ACC DISTROYED         3A144230           0A23 0 3165         DC /3165 ERR ID         3A144240           0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR         3A144250           0A26 0 70F1 MDX A6F0 LOOP         3A144260           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE         3A144260           0A28 0 0A28 N6F1 DC N6F1         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH £1         3A144290           0A2A 0 4E80 0A2D BSC 12 N6F2 BR TO N6F2£1 INDIRECT         3A144310           0A2C 0 7005 MDX H6F1 BSC FAILED         3A144320           0A2E 0 0A31 DC N6F2 MDX H6F1 BSC FAILED         3A144330           0A2E 0 7002 MDX H6F1 BSC FAILED         3A144360           0A31 0 7003 N6F3 MDX H6F1 BSC FAILED         3A144360           0A31 0 7003 N6F3 MDX H6F1 BSC FAILED         3A144360           0A32 0 4400 0F69 H6F1 BSI L F000 BSC DID NOT BRANCH         3A144380           0A35 0 4400 0F64 H6F2 BSI L F005 CK LOCK ON ERROR         3A144300           0A35 0 4400 0FC4 H6F2 BSI L F005 CK LOCK ON ERROR         3A144400           0A37 0 70F1         MDX A6F1 LOOP         3A144400						***	OF CHOTOLOT ORCOLTION	
0A21 0 4400 0F69         BSI L F000 ACC DISTROYED         3A144230           0A23 0 3165         DC /3165 ERR ID         3A144240           0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR         3A144250           0A26 0 70F1 MDX A6F0 LOOP         3A144250           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE         3A144270           0A28 0 0A28 N6F1 DC N6F1         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH £1         3A144290           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH £1         3A144300           0A20 0 7005 MDX H6F1 BSC FAILED         3A144320           0A2D 0 7004 N6F2 MDX H6F1 BSC FAILED         3A144320           0A2E 0 0A31 DC N6F3         3A144340           0A2F 0 7002 MDX H6F1 BSC FAILED         3A144350           0A30 0 7001 MDX H6F1 BSC FAILED         3A144350           0A31 0 7003 N6F3 MDX H6F1 BSC FAILED         3A144360           0A31 0 7003 N6F3 MDX H6F1 BSI L F000 BSC DID NOT BRANCH         3A144380           0A34 0 3166 DC A400 0F69 H6F1 BSI L F000 BSC DID NOT BRANCH         3A144390           0A35 0 4400 0F64 H6F2 BSI L F005 CK LOCK ON ERROR         3A144390		_	****		***			3A144420
0A21 0 4400 0F69         BSI L F000 ACC DISTROYED         3A144230           0A23 0 3165         DC /3165 ERR ID         3A144240           0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR         3A144250           0A26 0 70F1 MDX A6F0 LOOP         3A144260           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE         3A144270           0A28 0 0A28 N6F1 DC N6F1         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH &1 3A144300         3A144290           0A2A 0 4E80 0A2D BSC 12 N6F2 BR TO N6F2&1 INDIRECT         3A14430           0A2C 0 7005 MDX H6F1 BSC FAILED         3A144320           0A2D 0 7004 N6F2 MDX H6F1 BSC FAILED         3A14430           0A2E 0 0A31 DC N6F3         3A144360           0A31 0 7002 MDX H6F1 BSC FAILED         3A144350           0A31 0 7003 N6F3 MDX H6F1 BSC FAILED         3A144360           0A31 0 7003 N6F3 MDX H6F1 BSC DID NOT BRANCH         3A144370           0A34 0 3166 DC /3166 ERR ID         3A144380			H6F2		L		•	
0A21         0 4400         0F69         BSI         L         F000         ACC         DISTROYED         3A144230           0A23         0 3165         DC         /3165         ERR ID         3A144240           0A24         0 4400         OFC4         H6F0         BSI         L         F005         CK         LOCK ON         ERROR         3A144250           0A26         0 70F1         MDX         A6F0         LOOP         3A144260           0A27         0 7001         MDX         A6F1         EXIT         TO NEXT ROUTINE         3A144270           0A28         0 0A28         N6F1         DC         N6F1         SA144270         SA144280           0A29         0 6201         A6F1         LDX         2 1         LD XR 2 WITH &1         3A144280           0A2A         0 4E80         0A2D         BSC         12 N6F2         BR TO N6F2&1 INDIRECT         3A144310           0A2C         0 7005         MDX         H6F1         BSC FAILED         3A144320           0A2E         0 0A31         DC         N6F3         3A144340           0A2F         0 7002         MDX         H6F1         BSC FAILED         3A144350           0A30 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td>							_	
0A21 0 4400 0F69         BSI L F000 ACC DISTROYED         3A144230           0A23 0 3165         DC /3165 ERR ID         3A144240           0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR         3A144250           0A26 0 70F1 MDX A6F0 LOOP         3A144260           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE         3A144260           0A28 0 0A28 N6F1 DC N6F1         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH &1         3A144290           0A2A 0 4E80 0A2D BSC 12 N6F2 BR TO N6F2&1 INDIRECT         3A144310           0A2C 0 7005 MDX H6F1 BSC FAILED         3A144320           0A2E 0 0A31 DC N6F2 MDX H6F1 BSC FAILED         3A144340           0A2F 0 7002 MDX H6F1 BSC FAILED         3A144350           0A30 0 7001 MDX H6F1 BSC FAILED         3A144350	0A32 0 440	0 OF69		BSI	L	F000		
0A21 0 4400 0F69         BSI L F000 ACC DISTROYED         3A144230           0A23 0 3165         DC /3165 ERR ID         3A144240           0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR         3A144250           0A26 0 70F1 MDX A6F0 LOOP         3A144260           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE         3A144270           0A28 0 0A28 N6F1 DC N6F1         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH £1         3A144290           0A2A 0 4E80 0A2D BSC I2 N6F2 BR TO N6F2£1 INDIRECT         3A144310           0A2C 0 7005 MDX H6F1 BSC FAILED         3A144320           0A2E 0 0A31 DC N6F3         DC N6F3           0A2F 0 7002 MDX H6F1 BSC FAILED         3A144350			N6F3					
0A21 0 4400 0F69 0A23 0 3165 0DC /3165 ERR ID 3A144230         3A144230 3A144240           0A24 0 4400 0FC4 H6F0 BS1 L F005 CK LOCK ON ERROR 3A144250         3A144250           0A26 0 70F1 MDX A6F0 LOOP 3A14250         3A144260           0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE 3A144270         3A144260           0A28 0 0A28 N6F1 DC N6F1 3A144280         3A144280           0A29 0 6201 A6F1 LDX 2 1 LD XR 2 WITH &1 3A144290         3A144290           0A28 0 4E80 0A2D BSC 12 N6F2 BR TO N6F2&1 INDIRECT 3A144310         3A144300           0A2C 0 7005 MDX H6F1 BSC FAILED 3A144320         3A144330           0A2E 0 0A31 DC N6F3 3A144340								
0A21         0 4400         0F69         BSI         L         F000         ACC         DISTROYED         3A144230           0A23         0 3165         DC         /3165         ERR ID         3A144240           0A24         0 4400         0FC4         H6F0         BSI         L         F005         CK         LOCK ON         ERROR         3A144250           0A26         0 70F1         MDX         A6F0         LOOP         3A144260           0A27         0 7001         MDX         A6F1         EXIT         TO NEXT ROUTINE         3A144270           0A28         0 0A28         N6F1         DC         N6F1         3A144280           0A29         0 6201         A6F1         LDX         2         LD XR         WITH         X1         3A144290           0A2A         0 4E80         0A2D         BSC         I2 N6F2         BR         TO N6F2&I INDIRECT         3A144310           0A2C         0 7005         MDX         H6F1         BSC         FAILED         3A144320           0A2D         0 7004         N6F2         MDX         H6F1         BSC         FAILED         3A144330							BCC FAILED	
0A21 0 4400 0F69         BSI L F000         ACC DISTROYED         3A144230           0A23 0 3165         DC /3165         ERR ID         3A144240           0A24 0 4400 0FC4         H6F0 BSI L F005         CK LOCK ON ERROR         3A144250           0A26 0 70F1         MDX A6F0 LODP         3A144260           0A27 0 7001         MDX A6F1 EXIT TO NEXT ROUTINE         3A144270           0A28 0 0A28         N6F1 DC N6F1         3A144280           ************************************			N6F2				BSC FAILED	
0A21 0 4400 0F69 BSI L F000 ACC DISTROYED 3A144230 0A23 0 3165 DC /3165 ERR ID 3A144240 0A24 0 4400 0FC4 H6F0 BSI L F005 CK LOCK ON ERROR 3A144250 0A26 0 70F1 MDX A6F0 LODP 3A144260 0A27 0 7001 MDX A6F1 EXIT TO NEXT ROUTINE 3A144270 0A28 0 0A28 N6F1 DC N6F1 3A144280  ***********************************							BSC FAILED	3A144320
0A21 0 4400 0F69       BSI L F000       ACC DISTROYED       3A144230         0A23 0 3165       DC /3165       ERR ID       3A144240         0A24 0 4400 0FC4       H6F0 BSI L F005       CK LOCK ON ERROR       3A144250         0A26 0 70F1       MDX A6F0 LODP       3A144260         0A27 0 7001       MDX A6F1 EXIT TO NEXT ROUTINE       3A144270         0A28 0 0A28       N6F1 DC N6F1       3A144280         ***********************************			70, 1	-	_	-		
0A21 0 4400 0F69     BSI L F000     ACC DISTROYED     3A144230       0A23 0 3165     DC /3165     ERR ID     3A144240       0A24 0 4400 0FC4     H6F0 BSI L F005     CK LOCK ON ERROR     3A144250       0A26 0 70F1     MDX A6F0     LOOP     3A144260       0A27 0 7001     MDX A6F1     EXIT TO NEXT ROUTINE     3A144270       0A28 0 0A28     N6F1 DC     N6F1     3A144280	0429 0 620	1 ,						
0A21 0 4400 0F69       BSI L F000       ACC DISTROYED       3A144230         0A23 0 3165       DC /3165       ERR ID       3A144240         0A24 0 4400 0FC4       H6F0 BSI L F005       CK L0CK ON ERROR       3A144250         0A26 0 70F1       MDX A6F0       L00P       3A144260         0A27 0 7001       MDX A6F1       EXIT TO NEXT ROUTINE       3A144270	0A28 0 0A2	8						
0A21 0 4400 0F69       BSI L F000       ACC DISTROYED       3A144230         0A23 0 3165       DC /3165       ERR ID       3A144240         0A24 0 4400 0FC4       H6F0 BSI L F005       CK LOCK ON ERROR       3A144250							EXIT TO NEXT ROUTINE	
0A21 0 4400 0F69         BSI L F000         ACC DISTROYED         3A144230           0A23 0 3165         DC /3165         ERR ID         3A144240	0A26 0 70F	1		MDX		A6F0		3A144260
0A21 0 4400 0F69 BSI L F000 ACC DISTROYED 3A144230			H6F0		L			
					L			

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PROG ID

PAGE

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

CPU FUNCTION TEST

33A

					•	
2442 2 2020				N702	SAVE C & OF CONDITION	3A144900
0A69 0 2838 046A 0 F03C		STS EOR		N702 N707	ZERO ACC IF CORRECT OP	3A144910
0A6B 0 4C18 0A70		BSC	L	G708,&-	BRANCH ON ZERO	3A144920
0A6D 0 4400 0F69		BSI	Ľ	F000	8000 MINU 0001 FAILED	3A144930
OA6F O 30FE		DC	_	/30FE	ERR ID	3A144940
0A70 0 4400 OF98	G708	BSI	L	FOOE	CK LOCK ON ERROR	3A144950
0A72 0 70F3		MDX		A708	LOOP	3A144960
0A73 0 CO2E		LD		N702	LD STORE CARRY CONDITION	3A144970
0A74 0 F02C		EOR		N701	ZERO IF CORRECT BRANCH ON ZERO	3A144980 3A144990
0A75 0 4C18 0A7A 0A77 0 4400 0F69		BSC BSI	L	G70A,&- F000	OVERFLOW NOT SET	3A145000
0A77 0 4400 0F69		DC	L	/30FF	ERR ID	3A145010
QA7A 0 4400 OFC4	G70A	BSI	L	F005	CK LOCK ON ERROR	3A145020
0A7C 0 70E9	0.00	MDX	_	A708	LOOP	3A145030
	****	****	***	*******	******	3A145040
0A7D 0 2000	A70C	LDS		0	SET C AND OF OFF	3A145050
0A7E 0 C021		LD		N700	LD /0000	3A145060
0A7F 0 9025		S		N705	S /8000 STORE C & OF CONDITION	3A145070 3A145080
OA80 0 2821 OA81 0 FO23		STS EOR		N702 N705	ZERO ACC IF CORRECT	3A145090
0A82 0 4C18 0A87		BSC	L	670C, &-	BRANCH ON ZERO	3A145100
0A84 0 4400 0F69		BSI	Ĺ	F000	0000 MINUS 8000 FAILED	3A145110
0A86 0 3100		DC	_	/3100	ERR ID	3A145120
0A87 0 4400 OF98	G70C	BSI	L	FOOE	CK LOCK ON ERROR	3A145130
0A89 0 70F3		MDX		A70C	LOOP	3A145140
0A8A 0 C017		LD		N702	LD CON OF CEOF	3A145150
0A8B 0 F01A		EOR		N706	ZERO ACC IF CORRECT	3A145160
0A8C 0 4C18 0A9C		BSC	L	G70E,&- N702	BRANCH ON ZERO LD CON OF C & OF	3A145170 3A145180
OA8E O CO13 OA8F O FO11		LD AND		N702	AND IN /0001	3A145190
0A90 0 4C20 0A99		BSC	L	J70E•Z	BR IF NOT ZERO	3A145200
0A92 0 4400 0F69		BSI	Ĺ	F000	DVERFLOW NOT ON	3A145210
0A94 0 3101		DC	_	/3101	ERR ID	3A145220
0A95 0 4400 OFC4		BSI	L	F005	CK LOCK ON ERROR	3A145230
0A97 0 70E5		MDX		A70C	LOOP	3A145240
0A98 0 700F		MDX		A740	EXIT TO NEXT ROUTINE	3A145250
0A99 0 4400 OF69	J70E	BSI	L	F000	CARRY NOT ON	3A145260
0A9B 0 3102 0A9C 0 4400 OFC4	C705	DC		/3102 F005	ERR ID CK LOCK ON ERROR	3A145270 3A145280
.049E 0 70DE	G70E	BSI MDX	L	A70C	LOOP	3A145290
0A9F 0 7008		MDX		A740	EXIT TO NEXT ROUTINE	3A145300
OAAO O 0000	N700	DC		/0000		3A145310
OAA1 0 0001	N701	DC		/0001		3A145320
OAA2 O 0000	N702	DC		/0000	STORAGE	3A145330
OAA3 O FFFF	N703	DC		/FFFF		3A145340
OAA4 0 0002	N704	DC		1000		
				/0002		3A145350
OAA5 0 8000	N705	DC		/8000		3A145360
OAA6 0 0003	N705 N706	DC DC		/8000 /0003		3A145360 3A145370
	N705 N706 N707	DC		/8000		3A145360 3A145370 3A145380
OAA6 0 0003	N705 N706	DC DC		/8000 /0003 /7FFF	OF ADD DOUBLE	3A145360 3A145370
OAA6 0 0003	N705 N706 N707	DC DC		/8000 /0003 /7FFF	OF ADD DOUBLE	3A145360 3A145370 3A145380 3A145390
OAA6 0 0003	N705 N706 N707 * *	DC DC DC	***	/8000 /0003 /7FFF	OF ADD DOUBLE	3A145360 3A145370 3A145380 3A145390 3A145400
0AA6 0 0003 0AA7 0 7FFF	N705 N706 N707 * * *	DC DC DC	***	/8000 /0003 /7FFF TEST		3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145420
0AA6 0 0003 0AA7 0 7FFF	N705 N706 N707 * * * *********	DC DC DC	***	/8000 /0003 /7FFF TEST	*****************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145400 3A145420 3A145420 3A145440
OAA6 O OOO3 OAA7 O 7FFF  *********************************	N705 N706 N707 * * * ****************************	DC DC DC	*** FT	/8000 /0003 /7FFF TEST	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145420 3A145440 3A145440
OAA6 O OOO3 OAA7 O 7FFF  CORE DATA OR ADDR INSTRUCTI	N705 N706 N707 * * ******************************	DC DC DC	*** FT	/8000 /0003 /7FFF TEST	**************************************	3A145360 3A145370 3A145380 3A145380 3A145400 3A145400 3A145410 3A145420 3A145430 3A145440 3A145460
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * * ****************************	DC DC DC DC	+++ FT +++	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145440 3A145420 3A145440 3A145440 3A145440 3A145460 3A145460
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * ******************************	DC DC DC	*** FT	/8000 /0003 /7FFF TEST	**************************************	3A145360 3A145370 3A145380 3A145380 3A145400 3A145400 3A145410 3A145420 3A145430 3A145440 3A145460
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * ******************************	DC DC DC DC DC	FT ***	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145440 3A145440 3A145440 3A145460 3A145460 3A145460
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * ******************************	DC DC DC DC DC DC DC DC DC DC DC DC DC D	FT ***	78000 70003 77FFF TEST ************************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145440 3A145440 3A145460 3A145460 3A145470 3A145480 3A145480
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * ******************************	DC DC DC DC DC DC DC DC DC DPER—ATION ************************************	FT ***	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145490 3A145400 3A145410 3A145420 3A145440 3A145440 3A145440 3A145460 3A145470 3A145480 3A145500 3A145500 3A145500 3A145500
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * ******************************	DC DC DC DC DC DC DC DC DC DERON ATION LDS LDD AD STS EOR BSC BSI	FT *** L L	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145440 3A145440 3A145460 3A145460 3A145460 3A145460 3A145500 3A145510 3A145510 3A145510
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * ****** *LA- ON *BEL *******	DC DC DC DC DC DC DC ******************	FT ***	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145440 3A145440 3A145440 3A145460 3A145470 3A145480 3A145490 3A145510 3A145510 3A145520 3A145520 3A145530
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * * ******************************	DC DC DC DC DC DC DC DC DER-ATION DER-BT LDD AD STS EOR BSI DC BSI	FT ***	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145440 3A145440 3A145450 3A145460 3A145470 3A145480 3A145500 3A145510 3A145510 3A145530 3A145530 3A145530
0AA6 0 0003 0AA7 0 7FFF **********************************	N705 N706 N707 * ****** *LA- ON *BEL *******	DC DC DC DC DC DC DC ******************	FT ***	/8000 /0003 /7FFF TEST **********************************	**************************************	3A145360 3A145370 3A145380 3A145390 3A145400 3A145410 3A145420 3A145440 3A145440 3A145440 3A145460 3A145470 3A145480 3A145490 3A145510 3A145510 3A145520 3A145520 3A145530

- 1	DABA (	0	F400	OB6E		E OR				3A145580
				OAC1		BSC	L	G742,5-	BR ON ZERO	3 <b>A1</b> 45590
				0F69		BSI	L	F000	AD FFFFE0000 Q FAILED	3A145600
	DACO (					DC				3A145610
	OAC1 (			0F98	6742		L			3A145620
	DAC3			0010		MDX		A740	LOOP	3A145630
	OAC4					LD	L	N/40		3A145640
	DACE (					B2C	L	674416-	BRANCH UN ZEKU	3A145650
	OACS (					D S C	L	F000	CARRY ON	3A145660 3A145670
	DACA (			0169		DC B21	L		erimine en	3A145680
	OACD (			NEC4				F005	CK LUCK UM EBBUB	3A145690
	OACF (			0104		MDX .		A740		3A145700
	OADO (	-				MDX		G744	Luor .	3A145710
				0F69	H744				OVFLO ON	3A145720
	OAD3	_		0.07		DC.	-	/3106	FPP ID	3A145730
		-		OFC4	G744		1	F005		3A145740
	OAD6				• • • •	MDX	-	A740	LOOP	3A145750
		•			*****		***	*********	*************	3A145760
	OAD7	0	2000		A746			0	SET C AND OF OFF	3A145770
				0872		. 00	L			3A145770 3A145780
				OB 6E		AD	Ĺ	N742	A /FFFF /FFFF STORE COND OF C AND OF BRANCH ON ZERO AD 0000EFFFF A FAILED	3A145790
				086D		STS	Ĺ	N740	STORE COND OF C AND OF	3A145800
	OADE	Ō	4C18	OAE3		BSC	L	G746,&-	BRANCH ON ZERO	3A145810
				0F69		BSI	Ĺ	F000	AD 0000&FFFF A FAILED	3A145820
	OAE2					DC		/3107	ERR ID	3A145830
	OAE3	0	4400	0598	G746	BSI	L	F00E	CK LOCK ON ERROR	3A145840
	OAES	0	70F1			MDX		A746	LOOP	3A145850 3A145860
	OAE6	0	1800			RTE		16	INTERCHANGE A AND Q	3A145860
	QAE7	0	4C18	OAEC		BSC	L	G748,&-	BRANCH UN ZEKU	381778/U
	OAE9	0	4400	0F 69		BSI	L	F000	AD 0301EFFFF Q FAILED	3A145880
	OAEB					DC		/3108	ERR ID	3A145890
				0F98	G748	BSI	L	F00E		3A145900
	DAEE					MDX		A746	LOOP	3A145910
	OAEF			086D		LD	L	N740	LD COND OF C AND OF	3A145920
	OAF1					EOR		N704	LD COND OF C AND OF CHECK FOR CARRY ZERO# C AND OF OK CHECK FOR OVERFLOW \$815¤	3A145930
		_		0800		BSC	L	G74A, E-	ZERO# C AND OF OK	3A145940
				OAFD		BSC	Ļ	H74A,E	CHECK FOR DAEKLEDM #8120	3A145950
	DAF6	0	4400	0F69		BSI	L			3A145960
		_				DC			ERR ID CK LOCK ON ERROR	3A145970
	0AF8	_							CK LUCK UN EKKUK	24145000
	OAF8 OAF9	0	4400	OFC4		BSI	•	F005	1.000	3A145980
	OAF8 OAF9 OAFB	0	4400 7008			MDX		A746	LOOP	3A145990
	OAF8 OAF9 OAFB	0	4400 7008 7003			MDX MDX		A746 G74A	LOOP	3A145990 3A146000
	OAF8 OAF9 OAFB OAFC	0 0 0 0	4400 7008 7003 4400		H74A	MDX MDX BSI		A746 G74A F000	OVFLO ON	3A145990 3A146000 3A146010
	OAF8 OAF9 OAFB OAFC OAFD	0 0 0 0	4400 7008 7003 4400 310A	0F69		MDX MDX BSI DC	L	A746 G74A F000	OVFLO ON	3A145990 3A146000 3A146010 3A146020
	OAF8 OAF9 OAFB OAFC OAFD OAFF	0 0 0 0 0	4400 7008 7003 4400 310A 4400	0F69 0FC4		MDX MDX BSI DC BSI	L	A746 G74A F000	OVFLO ON	3A145990 3A146000 3A146010 3A146020 3A146030
	OAF8 OAF9 OAFB OAFC OAFD	0 0 0 0 0	4400 7008 7003 4400 310A 4400	0F69 0FC4	G74A	MDX MDX BSI DC BSI	L L	A746 G74A F000 /310A F005	OVFLO ON ERR ID CK LOCK ON ERROR	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2	00000	4400 7008 7003 4400 310A 4400 70D4	0F69 0FC4	G74A	MDX MDX BSI DC BSI MDX	L L	A746 G74A F000 /310A F005 A746	OVFLO ON ERR ID CK LOCK ON ERROR LOOP	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2	00000	4400 7008 7003 4400 310A 4400 70D4	0F69 0FC4	G74A	MDX MDX BSI DC BSI MDX *****	L L	A746 G74A F000 /310A F005 A746	OVFLO ON ERR ID CK LOCK ON ERROR	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2 *****	0 0 0 0 0 0	4400 70DB 7003 4400 310A 4400 70D4	0F69 0FC4 ********	G74A ***** *****	MDX MDX BSI DC BSI MDX ******	L L :**:	A746 G74A F000 /310A F005 A746	OVFLO ON ERR ID CK LOCK ON ERROR LOOP	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2  ***** CORE ADDR	0 0 0 0 0 0 0	4400 70DB 7003 4400 310A 4400 70D4 ******	OF69 OFC4 ************************************	G74A **** ***** *LA- *BEL	MDX MDX BSI DC BSI MDX ****** OPER- ATION	L L :**:	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2 ****** CORE ADDR *****	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4400 70DB 7003 4400 310A 4400 70D4 ******	OF69 OFC4 A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ****** OPER- ATION	L L  **   **   FT	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2  ***** CORE ADDR ***** OBO3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4400 70DB 7003 4400 310A 4400 70D4 ************************************	OF69 OFC4 A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ****** OPER- ATION	L L  **   **   FT	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080 3A146090
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2  ***** CORE ADDR ***** OBO3 OBO4	000000	4400 70DB 7003 4400 310A 4400 70D4 ***** DAT. INS 2000 C869	OF69 OFC4 A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ****** OPER- ATION ***** LDS	L L  **   **	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146010 3A146020 3A146030 3A146040 3A146050 3A146070 3A146070 3A146090 3A146090 3A146100
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2  ***** CORE ADDR ***** OBO3	000000	4400 70DB 7003 4400 310A 4400 70D4 ***** DAT. INS 2000 C869 8868	OF69 OFC4 A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ****** OPER- ATION ***** LDS LDD	L L  **   **	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080 3A146090 3A146100 3A146110
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2 ***** CORE ADDR ***** 0B03 OB04 OB05	000000 ** ** 0000	4400 7008 7003 4400 310A 4400 70D4 ****** DAT, INS: 2000 C869 8868 2866	OF69 OFC4 A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX BSI DC BSI MDX ****** OPERON ***** LDS LDD AD	L L  **   **	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080 3A146080 3A146080 3A146100 3A146110 3A146110
	OAF8 OAF9 OAFB OAFC OAFD OBO2 ***** CORE ADDR ***** 0803 0804 0805 0806	000000 ** ** 00000	4400 7008 7003 4400 310A 4400 70D4 ***** DAT: INS: 1NS: 2000 C869 8868 2866 F066	OF69 OFC4 A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX BSI DC BSI MDX ****** OPER ATION ***** LDD AD STS	L L  **   **	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146010 3A146020 3A146040 3A146050 3A146060 3A146070 3A146080 3A146090 3A146100 3A146110 3A146120 3A146130
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2  ***** CORE ADDR ***** OBO3 OBO4 OBO5 OBO6 OBO7	000000 ** ** 00000	4400 70DB 7003 4400 310A 4400 70D4 ****** 2000 C869 8868 2866 4C18	OF69  OFC4  A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ****** OPER- ATION ***** LDS LDD STS EOR	L L !**: FT !**:	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146090 3A146100 3A146110 3A146120 3A146130 3A146130 3A146150 3A146160
	OAF8 OAF9 OAFB OAFC OAFD OBO0 OBO2  ****** CORE ADDR ***** OBO3 OBO4 OBO5 OBO6 OBO7 OBO8	000000 ** *000000	4400 70DB 7003 4400 34400 70D4 ************************************	OF69  OFC4  A OR TRUCTION	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ***** ***** OPER- ATION ***** LDS LDD AD STS EOR BSC	L L !**: FT !**:	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146060 3A146090 3A146100 3A146110 3A146120 3A146120 3A146130 3A146150 3A146150 3A146150 3A146170
	OAF8 OAF9 OAFB OAFC OAFC OBO0 OBO2  ***** CORE ***** OBO3 OBO4 OBO5 OBO6 OBO7 OBO8 OBOA	000000 ** ** 0000000	4400 70DB 7003 4400 310A 4400 70D4 ************************************	OF69  OFC4  A OR  TRUCTION  OBOD  OF69	G74A ***** **** *LA- *BEL	MDX MDX BSI DC BSI MDX ***** ***** OPER ATION LDD AD STS EOR BSC BSI	L L !**: FT !**:	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080 3A146080 3A146100 3A146110 3A146120 3A146130 3A146140 3A146150 3A146160 3A146160 3A146170 3A146180
	OAF8 OAF9 OAFB OAFC OAFD OBO0 OBO2  ***** CORE ADDR** OBO3 OBO4 OBO5 OBO6 OBO7 OBO8 OBO8 OBO8 OBO8	000000 ** *00000000	4400 70DB 7003 4400 310A 4400 70D4 ****** 2000 C869 8868 8866 64C18 4400 310B 4400	OF69  OFC4  A OR  TRUCTION  OBOD  OF69	G74A ***** ***** *LA- *BEL ***** A74C	MDX MDX BSI DC BSI MDX ****** OPER- ATION *LDD AD STS E OR BSC BSI DC	L L FT 1**1	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP  *********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080 3A146100 3A146110 3A146110 3A146130 3A146140 3A146140 3A146150 3A146160 3A146160 3A146180 3A146180 3A146180
	OAF8 OAF9 OAFB OAFC OAFC OBO0 OBO2  ***** CORE ADDR ***** OBO3 OBO6 OBO7 OBO8 OBO6 OBO7 OBO8 OBO6 OBO7	000000 ** ** 0000000000	4400 70DB 7003 4400 310A 4400 70D4 ***** 2000 C869 8868 2866 6C18 4400 310B 4400 70F3	OF69  OFC4  ***********************************	G74A ***** ***** *LA- *BEL ***** A74C	MDX MDX BSI DC BSI MDX ****** OPER- ATION ***** LDD AD STS EOR BSC BSI DC BSI	L L FT 1**1	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP  *********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146070 3A146080 3A146100 3A146110 3A146120 3A146130 3A146150 3A146150 3A146160 3A146170 3A146180 3A146190 3A146200
	OAF8 OAF9 OAFB OAFC OAFD OAFF OBOO OBO2 ***** CORE ADDR ***** OBO3 OBO6 OBO7 OBO8 OBO6 OBO7 OBO8 OBO6 OBO7	000000 ** *0000000000	4400 70DB 7003 4400 310A 4400 70D4 ****** 2000 C869 8868 2866 4C18 4400 310B 4400 310B 4400 318D0	OF69  OFC4  ***********************************	G74A ***** ***** *LA- *BEL ***** A74C	MDX BSI DC BSI MDX *****  OFER OFER OFER OFER OFER OFER OFER OFE	L L FT 1**1	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146020 3A146030 3A146040 3A146050 3A146070 3A146090 3A146090 3A146110 3A146120 3A146120 3A146150 3A146160 3A146170 3A146180 3A146190 3A146190 3A146200 3A146210
	OAF8 OAF9 OAFB OAFC OAFD OBO0 OBO2  ***** OBO0 ****** OBO3 OBO4 OBO6 OBO7 OBO8 OBO6 OBO7 OBO8 OBO6 OBO7	000000 ** *00000000000	4400 7008 7003 4400 34400 7004 ******************************	OF69  OFC4  ***********************************	G74A ***** ***** *LA- *BEL ***** A74C	MDX BSI DC BSI MDX *****  *****  OPER - ***** LDS LDD AD STS EOR BSI DC BSI MDX RTE	L L FT 1**1	A746 G74A F000 /310A F005 A746 ************************************	OYFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146090 3A146090 3A146100 3A146110 3A146120 3A146150 3A146160 3A146170 3A146180 3A146180 3A146190 3A146200 3A146220
	OAF8 OAF9 OAFB OAFC OAFC OBOO OBO2  ***** CORE ADDR ***** OBO3 OBO6 OBO7 OBO8 OBO6 OBO7 OBO8	000000 ** *00000000000000	4400 70DB 7003 4400 310A 4400 70D4 ****** 2000 C869 8868 8866 64C18 4400 310B 4400 70F3 18D0 F062 4410 4400	OF69 OFC4  A OR TRUCTION  OBOD OF69 OF98	G74A ***** ***** *LA- *BEL ***** A74C	MDX BSI DC BSI MDX ***** ***** OPER- ATION *LDD AD STS EOR BSI DC BSI MDX EOR BSI	L L FT 1000	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146080 3A146090 3A146100 3A146120 3A146120 3A146150 3A146150 3A146160 3A146170 3A146180 3A146190 3A146200 3A146210 3A146210 3A146220 3A146230
	OAF8 OAF9 OAFB OAFC OAFC OBOO OBO2  ***** CORE ADDR ***** OBO3 OBO6 OBO7 OBO8	000000 * *00000000000000	4400 70DB 7003 4400 310A 4400 70D4 ***** 2000 C869 8868 8666 4C18 4400 310B 70F3 18D0 F062 4C18 4400 310C	OF69  OFC4  ***********************************	G74A ***** *LA- *BEL ***** A74C	MDX BSI BSI BSI MDX *****  *****  OFION ADS BSC BSC BSC BSC BSI BC BSI RTE BSC BSI DC	L L ++++++++++++++++++++++++++++++++++	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146000 3A146010 3A146030 3A146030 3A146050 3A146060 3A146080 3A146080 3A146100 3A146110 3A146110 3A146130 3A146140 3A146160 3A146160 3A146160 3A146160 3A146160 3A146200 3A146200 3A146200 3A146220 3A146230 3A146240
	OAF8 OAF9 OAFB OAFC OAFC OBOO OBO2  ***** CORE ADDR ***** OBO3 OBO6 OBO7 OBO8 OBO6 OBO7 OBO8	000000 * *00000000000000	4400 70DB 7003 4400 310A 4400 70D4 ***** 2000 C869 8868 8666 4C18 4400 310B 70F3 18D0 F062 4C18 4400 310C	OF69  OFC4  ***********************************	G74A ***** ***** *LA- *BEL ***** A74C	MDX BSI DC BSI MDX ***** ***** OPER- ATION *LDD AD STS EOR BSI DC BSI MDX EOR BSI	L L FT L L	A746 G74A F000 /310A F005 A746 ************************************	OVFLO ON ERR ID CK LOCK ON ERROR LOOP **********************************	3A145990 3A146010 3A146020 3A146030 3A146040 3A146050 3A146060 3A146080 3A146090 3A146100 3A146120 3A146120 3A146150 3A146150 3A146160 3A146170 3A146180 3A146190 3A146200 3A146210 3A146210 3A146220 3A146230

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0819	٥	70F 9			MDX		A74C	LOOP	3A146260
OBIA					LD		N740	= -	3A146270
0818					EOR		N748	CHECK FOR OVERFLOW	3A146280
OBIC	0	4C18	0B2A			L	J740,&-	BRANCH ON ZERO	3A146290
OBIE	0	4C04	OB27			L	K740, E	CHECK FOR CARRY	3A146300
	_		0F69_			L	F000		3A146310
0B22					DC		/310E		3A146320
		4400	OFC4		BSI	L	F005		3A146330
0825					MDX		A74C J740	LOOP	3A146340 3A146350
0B26		4400	0E 40	K740	MDX BSI	L	F000	OVFLO ON	3A146360
		310D	0103	KITU	DC	•	/310D		3A146370
		4400	OFC4	J740	BSI	L	F005	CK LOCK ON ERROR	3A146380
		70D6			MDX	_	A74C	LOOP	3A146390
				****	*****	***	*******	*******	3A146400
		2000		B742			0	SET C AND OF OFF	3A146410
		C847			LDD		N74C	LD A#/FFFF Q#/7FFF	3A146420
OB2F					AD		N742	A /FFFF /FFFF	3A146430
		283C F03C			STS EOR		N740 N742	STORE CONDITION OF C & OF	3A146440 3A146450
			0837		BSC	L	J742, &-	BRANCH ON ZERO	3A146460
		4400			BSI	Ĺ	F000	AD FFFFEFFF A FAILED	3A146470
		310F	0.07		DC.	_	/310F	ERR ID	3A146480
0P37	0	4400	0F98	J742	BSI	L	FOOE	CK LOCK ON ERROR	3A146490
	-	70F3			MDX		B742	LOOP	3A146500
		1800			RTE		16	INTERCHANGE A AND Q	3A146510
	-	F039			EOR		N74B	00 AUGU ON 3500	3A146520
		4C18			BSC BSI	L	J744,&- F000	BRANCH ON ZERO AD /7FFF&FFFF Q /FAILED	3A146530 3A146540
		3110	UFOY		DC	_	/3110	ERR ID	3A146550
	-	4400	0598	J744		L	FOOE	CK LOCK ON ERROR	3A146560
		70E9	<b>C</b> . 7 <b>C</b>		MDX	_	B742	LOOP	3A146570
0B44	0	C028			LD		N740	LD C AND OF CONDITION	3A146580
0845	0	F032			EOR		N748	ZERO IF CARRY WAS ON	3A146590
		4C18			BSC	L	J746, &-	BRANCH ON ZERO	3A146600
		4C04			BSC	Ļ	K746,E	CHECK FOR /CARRY CARRY NOT ON	3A146610 3A146620
	_	4400 3112	UFOY		BSI DC	L	F000 /3112	ERR ID	3A146630
		4400	OFC4		BSI	L		CK LOCK ON ERROR	3A146640
		70DD	0.01		MDX		B742	LOOP	3A146650
0850	0	7003			MDX		J746		3A146660
0B51	0	4400	0F 69	K746	BSI	L	F000	OVFLO ON	3A146670
	_	3111		_	DC		/3111	ERR ID	3A146680
-		4400		J746		L	F005	CK LOCK ON ERROR	3A146690
0856	0	7006			MDX *****		B742	LOOP	3A146700 3A146710
****	**	****	******					********	
CORE			A OR		OPER-				3A146730
ADDR						FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	3A146740
			******			**		*********	
		C81A		B747	_		N746	LD A#/0000 Q#/0001	3A146760
		881A			AD		N747	A /0001 /0001	3A146770
		F019	0B5F		E OR BSC	L	N747 J748,&-	ZERO ACC IF CORRECT OP BRANCH ON ZERO	3A146780 3A146790
			0F69		BSI	Ĺ	F000	AD-ODD A REG FAILED	3A146800
		3113			DC	-	/3113	ERR ID	3A146810
			0F98	J748	BSI	L	FOOE	CK LOCK ON ERROR	3A146820
		70F5			MDX		8747	LOOP	3A146830
		1800			RTE		16	NOW A#/0002 Q#/0000	3A146840
		F014			EOR		N748	ZERO ACC IF CORRECT OP	3A146850
			0869 0F69		BSC BSI	L	J74A,&- F000	BRANCH ON ZERO AD-ODD Q REG FAILED	3A146860 3A146870
		3114			DC B21	L	/3114	ERR ID	3A146880
			OFC4	J74A	BSI	L	F005	CK LOCK ON ERROR	3A146890
		70EB			MDX	-	B747	LOOP	3A146900
0860	. 0	700C			MDX	•	A780	EXIT TO NEXT ROUTINE	3A146910
		0000		N740	DC	_	/0000		3A146920
086E	:	0000			BSS	E			3A146930

OB6E O FFFF	N742	DC		/FFFF		3A146940
OB6F O FFFF		DC		/FFFF		3A146950
<b>0870 0 0000</b>	N744	DC		/0000		3A146960
0871 0 0000		DC		/0000		3A146970
0872 0 0000	N746	DC		/0000		3A146980
0B73 0 0001	N747	DC		/0001		3A146990
OB74 O FFFE	N74A	DC		/FFFE		3A147000
0875 0 7FFE	N74B	DC		/7FFE		3A147010
OB76 O FFFF	N74C	DC		/FFFF		3A147020
0B77 0 7FFF		DC		/7FFF		3A147030
0878 0 0002	N748	DC		/0002		3A147040
	*					3A147050
•	*				TEST SUB DOUBLE	3A147060
•	*					3A147070
			***		**********	3A147080
0B79 0 2000	A780	LDS		0	SET C AND OF OFF	3A147090
0B7A 0 C867		LDD		N782	LD A#/0000 Q#/0000	3A147100
0878 0 9868		SD		N784	\$ /0000 /0001	3A147110
0870 0 2864		STS		N780	STORE C AND OF CONDITION	3A147120
087D 0 F068		EOR		N786	ZERO WITH /FFFF	3A147130
OB7E O 4C18 OB83		BSC	L	G780,&-	BRANCH ON ZERO	3A147140
0880 0 4400 0F69		BSI	L	F000	SD 0000-0000 ACC FAILED	3A147150
OB82 O 3115 OB83 O 4400 OF98	G780	DC BS I		/3115	ERR 1D	3A147160
0885 0 70F3	6780	MDX	L	F00E A780	CK LOCK ON ERROR	3A147170
0886 0 1800		RTF		16	LOOP NOW A#/FFFF Q#/0000	3A147180
0887 0 F05E		EOR		N786	ZERO WITH /FFFF	3A147190 3A147200
0888 0 4C18 0B8D		BSC	L	G782.&-	BR ON ZERO	3A147210
088A 0 4400 0F69		BSI	ĭ	F000	SD 0000-0001 Q FAILED	3A147220
OB8C 0 3116		DC.	•	/3116	ERR ID	3A147230
088D 0 4400 0F98	G782		L	FOOE	CK LOCK ON ERROR	3A147240
088F 0 70E9		MDX	_	A780	LOOP	3A147250
0B90 0 C050		LD		N780	LD C AND OF CONDITION	3A147260
0B91 0 F056		EOR		N788	ZERO IF CARRY WAS ON	3A147270
0892 0 4C18 0BA0		BSC	L	G784, &-	BRANCH ON ZERO	3A147280
<b>0894 0 4C04 0B9D</b>		BSC	L	H784,E	CHECK FOR CARRY	3A147290
0B96 0 4400 0F69		BSI	L	F000	CARRY NOT ON	3A147300
0898 0 3117		DC		/3117		3A147310
0899 0 4400 OFC4		BSI	L	F005		3A147320
0B9B 0 70DD		MDX		A780	LOOP	3A147330
0B9C 0 7003	W70/	MDX		G784		3A147340
089D 0 4400 0F69	H784	BSI	L	F000	OVFLO ON	3A147350
089F 0 3118 08A0 0 4400 0FC4	<b>G784</b>	DC BS I	L	/3118 F005	ERR ID CK LOCK ON ERROR	3A147360 3A147370
OBA2 0 70D6	0107	MDX	_	A780	LOOP	3A147380
0025 0 1000	****		***		******	3A147390
************					******************	
CORE DATA OR		OPER-				3A147410
			FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	
					*******	
OBA3 0 2000	A786	LDS		0	SET C AND OF OFF	3A147440
OBA4 0 C83D		LDD		N782	LD A#/0000 Q#/0000	3A147450
OBA5 0 9840		SD		N786	/FFFF /FFFF	3A147460
OBA6 O 4C18 OBAB		BSC	L	G786,&-	BRANCH ON ZERO	3A147470
OBAB 0 4400 OF69		BSI	L	F000	SD 0000-FFFF A FAILED	3A147480
OBAA 0 3119		DC		/3119	ERR ID	3A147490
OBAB 0 4400 OF98	G786	BSI	L	FOOE	CK LOCK ON ERROR	3A147500
OBAD O 70F5		MDX		A786	LOOP	3A147510
OBAE 0 18D0		RTE		16	NDW A#/0001 Q#/0000	3A147520
OBAF O FO35		EOR		N785	ZERO WITH /0001	3A147530
0BB0 0 4C18 0BB5		BSC	L	G788, &-	BRANCH ON ZERO	3A147540
0882 0 4400 0F69		BSI	L	F000	SD 0000-FFFF Q FAILED	3A147550
0884 0 311A	C70C	DC		/311A	ERR ID	3A147560 3A147570
0885 0 4400 0FC4	G788	BSI	L	F005 A786	CK LOCK ON ERROR	3A147580
0BB7 0 70EB	***	MDX	***		LUUP ***************	3A147590
OBB8 0 C831	A78A	LDD		N78A	LD A#/0000 Q#/C000	3A147600
0889 0 982C	AIOA	SD		N786	S /FFFF /FFFF	3A147610
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OBBA O 4C18 OBBF		BSC	L	G78A, &-	BRANCH ON ZERO	3A147620
OBBC 0 4400 OF69		BSI	L	F000	SD 0000-FFFF A FAILED	3A147630
OBBE 0 3118		DC		/3118	ERR ID	3A147640
OBBF 0 4400 OF98	G78A	BSI	L	FOOE	CK LOCK ON ERROR	3A147650
OBC1 0 70F6		MDX		A78A	LOOP	3A147660
OBC2 0 18D0		RTE		16	NOW A#/C001 Q#/0000	3A147670
OBC3 O FO25		EOR		N78D	ZERD WITH /COOl	3A147680
OBC4 O 4C18 OBC9		BSC			BRANCH ON ZERO	3A147690
OBC6 0 4400 OF69		BSI	L	F000	SD COOO-FFFF Q FAILED	3A147700
OBC8 0 311C OBC9 0 4400 OFC4	C70C	DC		/311C	ERR ID	3A147710
OBCB 0 70EC	G78¢	BSI MDX	L	F005	CK LOCK ON ERROR	3A147720
ODCB O TOEC	***			A78A	LOOP	3A147730
OBCC O C815	A78E			N782	LD A#/0000 Q#/0000	3A147740 3A147750
OBCD 0 9819		SD		N787	S /FFFF /FFFF	3A147760
OBCE 0 4C18 OBD3		BSC	L		BRANCH ON ZERO	3A147770
OBDO 0 4400 OF69		BSI	Ĺ	F000	SD-ODD A FAILED	3A147780
GBD2 0 311D		DC		/311D	ERR ID	3A147790
OBD3 0 4400 OF98	678E	BSI	L	F00E	CK LOCK ON ERROR	3A147800
OBD5 0 70F6		MDX		A78E	LOOP	3A147810
08D6 0 18D0		RTE			NOW A#/0001 Q#/0000	3A147820
0BD7 0 F00D		EOR		N785	ZERD WITH /0001	3A147830
OBD8 O 4C18 OBDD		BSC	L	• -	BRANCH ON ZERO	3A147840
08DA 0 4400 0F69		BSI	L	F000	SD-ODD Q FAILED	3A147850
OBDC 0 311E OBDD 0 4400 OFC4	H780	DC		/311E	ERR ID	3A147860
OBDF 0 70EC	n/60	BS I MDX	L	F005 A78E	LOOP ERROR	3A147870
OBEO O 700B		MDX		A7CO	EXIT TO NEXT ROUTINE	3A147880
OBE1 0 0000	N780	DC		/0000	STORAGE	3A147890 3A147900
OBE2 0000		BSS	E	70000	JIONAGE	3A147910
OBE2 0 0000	N782	DC	-	/0000		3A147920
OBE3 0 0000		DC		/0000		3A147930
OBE4 0 0000	N784	DC		/0000		3A147940
OBE5 0 0901	N785	DC		/0001		3A147950
ABE 4 A FEFF						
OBE6 O FFFF	N786	DC		/FFFF		3A147960
OBE7 O FFFF	N787	DC		/FFFF /FFFF		
OBE7 O FFFF OBE8 O 0002	N787 N788	DC DC		/FFFF /0002		3A147960
OBE7 O FFFF OBE8 O OOO2 OBE9 O COO1	N787 N788 N78D	DC DC DC		/FFFF /0002 /C001		3A147960 3A147970 3A147980 3A147990
OBE7 O FFFF OBE8 O OOO2 OBE9 O COO1 OBEA O OOOO	N787 N788	DC DC DC DC		/FFFF /0002 /C001 /0000		3A147960 3A147970 3A147980 3A147990 3A148000
OBE7 O FFFF OBE8 O OOO2 OBE9 O COO1	N787 N788 N78D N78A	DC DC DC		/FFFF /0002 /C001		3A147960 3A147970 3A147980 3A147990 3A148000 3A148010
OBE7 O FFFF OBE8 O OOO2 OBE9 O COO1 OBEA O OOOO	N787 N788 N78D N78A	DC DC DC DC		/FFFF /0002 /C001 /0000 /C000	DE MINITIBLY OBSPATION	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020
OBE7 O FFFF OBE8 O OOO2 OBE9 O COO1 OBEA O OOOO	N787 N788 N78D N78A	DC DC DC DC		/FFFF /0002 /C001 /0000 /C000	OF MULTIPLY OPERATION	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030
OBE7 O FFFF OBE8 O OOO2 OBE9 O COO1 OBEA O OOOO	N787 N788 N78D N78A	DC DC DC DC	***	/FFFF /0002 /C001 /0000 /C000		3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148040
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COOO	N787 N788 N78D N78A * *	DC DC DC DC DC	***:	/FFFF /0002 /C001 /0000 /C000	*******	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148040
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COOO	N787 N788 N78D N78A * * *	DC DC DC DC DC	***:	/FFFF /0002 /C001 /0000 /C000		3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148020 3A148040 3A148040 3A148040
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  ********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC DC DC DC DC	**** FT	/FFFF /0002 /C001 /0000 /C000 TEST (	REMARKS IDESFOR AT RIGHT	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148040 3A148050 3A148060 3A148060
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  CORE DATA OR ADDR INSTRUCTION	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC DC DC DC DC DC	**** FT	/FFFF /0002 /C001 /0000 /C000 TEST (	**************************************	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148040 3A148050 3A148060 3A148060
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  ********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC D	**** FT	/FFFF /0002 /C001 /0000 /C000 TEST (	REMARKS ID&SEQ# AT RIGHT	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148040 3A148050 3A148060 3A148060
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC D	**** FT	/FFFF /0002 /C001 /0000 /C000 TEST (	REMARKS ID&SEQ# AT RIGHT LD /5555 M /2AAA	3A147960 3A147970 3A147980 3A147990 3A148010 3A148010 3A148020 3A148030 3A148040 3A148050 3A148060 3A148060 3A148080 3A148080 3A148080 3A148090 3A148100
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC DC DC DC DC DC DC	FT F**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT LD /5555 M /2AAA ZERO WITH /0E38	3A147960 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148050 3A148070 3A148080 3A148080 3A148100 3A148100 3A148110 3A148120
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC D	FT F***	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT ************************************	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148060 3A148070 3A148080 3A148090 3A148110 3A148110 3A148110
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC D	FT F**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148040 3A148050 3A148060 3A148060 3A148080 3A148100 3A148110 3A148120 3A148120 3A148120 3A148140
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** *LA- *BEL ******	DC D	FT F**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT LD /5555 M /2AAA ZERO WITH /0E38 BRANCH ON ZERO M /5555X/2AAA ACC FAILED ERR ID	3A147960 3A147970 3A147980 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148070 3A148070 3A148080 3A148100 3A148110 3A148120 3A148130 3A148130 3A148130 3A148130
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * * * * * * * * * * * * * * * * *	DC D	FT F***	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A147960 3A147970 3A147980 3A148000 3A148010 3A148020 3A148030 3A148040 3A148050 3A148060 3A148070 3A148080 3A148110 3A148110 3A148120 3A148130 3A148140 3A148140 3A148140 3A148140
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** *LA- *BEL ******	DC D	FT F**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A147960 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148050 3A148070 3A148080 3A148100 3A148100 3A148120 3A148130 3A148140 3A148150 3A148160 3A148160 3A148160
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** *LA- *BEL ******	DC D	FT F**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  LD /5555 M /2AAA ZERO WITH /0E38 BRANCH ON ZERO M /5555X/2AAA ACC FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/9C72 Q#/0000	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148060 3A148070 3A148080 3A148100 3A148110 3A148110 3A148120 3A148140 3A148150 3A148180
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** *LA- *BEL ******	DC D	FT F**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  THE PROPERTY OF THE	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148060 3A148060 3A148070 3A148080 3A148100 3A148100 3A148120 3A148120 3A148120 3A148130 3A148140 3A148140 3A148140 3A148140 3A148140 3A148140 3A148180 3A148180 3A148180
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** *LA- *BEL ******	DC D	FT:**:	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  LD /5555 M /2AAA ZERO WITH /0E38 BRANCH ON ZERO M /5555X/2AAA ACC FAILED ERR ID CK LOCK ON ERROR LOOP NOW A#/9C72 Q#/0000	3A147960 3A147970 3A147980 3A148000 3A148000 3A148020 3A148030 3A148040 3A148050 3A148060 3A148060 3A148080 3A148100 3A148110 3A148120 3A148120 3A148130 3A148140 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ******** *LA- *BEL ******* A7CO	DC D	FT	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A147960 3A147970 3A147980 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148060 3A148060 3A148070 3A148080 3A148100 3A148100 3A148120 3A148120 3A148120 3A148130 3A148140 3A148140 3A148140 3A148140 3A148140 3A148140 3A148180 3A148180 3A148180
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** *LA- *BEL ******	DC D	FT	/FFFF /0002 /C001 /0000 /C000 TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A147960 3A147970 3A147980 3A148000 3A148000 3A148010 3A148020 3A148030 3A148050 3A148060 3A148060 3A148070 3A148080 3A148080 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * ****** *LA- *BEL ***** A7CO	DC D	FT	/FFFF /0002 /C000 /C000  TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A147960 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148050 3A148070 3A148080 3A148100 3A148100 3A148110 3A148120 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148180 3A148200 3A148210 3A148220
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** ***** **BEL ***** A7CO	DC D	FT	/FFFF /0002 /C001 /0000 /C000  TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  ***********************************	3A147960 3A147970 3A147980 3A147990 3A148000 3A148000 3A148030 3A148030 3A148050 3A148060 3A148060 3A148080 3A148080 3A148100 3A148110 3A148120 3A148120 3A148150 3A148180 3A148180 3A148180 3A148180 3A148200 3A148200 3A148230 3A148230 3A148250
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * * ****** *LA- *BEL ***** A7CO	DC D	FT	/FFFF /0002 /C001 /0000 /C000  TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A147960 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148060 3A148070 3A148080 3A148080 3A148100 3A148100 3A148120 3A148120 3A148150 3A148150 3A148180 3A148180 3A148180 3A148180 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** ***** **BEL ***** A7CO	DC D	FT L L L L L L L L L L L L L L L L L L L	/FFFF /0002 /C000  TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A147960 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148050 3A148070 3A148080 3A148080 3A148100 3A148100 3A148120 3A148120 3A148180 3A148180 3A148180 3A148180 3A148180 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** ***** **BEL ***** A7CO	DC D	FT	/FFFF /0002 /C000 /C000  TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A147960 3A147970 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148050 3A148070 3A148070 3A148080 3A148100 3A148110 3A148120 3A148140 3A148150 3A148160 3A148160 3A148180 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820
OBE7 O FFFF OBE8 O 0002 OBE9 O COO1 OBEA O 0000 OBEB O COO0  **********************************	N787 N788 N78D N78A * * ****** ***** **BEL ***** A7CO	DC D	FT L L L L L L L L L L L L L L L L L L L	/FFFF /0002 /C000  TEST ( ************************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A147960 3A147970 3A147990 3A148000 3A148010 3A148020 3A148030 3A148050 3A148050 3A148050 3A148070 3A148080 3A148080 3A148100 3A148100 3A148120 3A148120 3A148180 3A148180 3A148180 3A148180 3A148180 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820 3A14820

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

415490 415490C 419643 420403 420403A

EC NO.

				(2.2.		
0007 0 3121		DC		/3121	ERR ID	3A148300
0C08 0 4400 0F98	G7C4	BSI	L	FOOE	CK LOCK ON ERROR	3A148310
OCOA O 70F6		MDX		A7C4	LOOP	3A148320
OCOB O 18DO		RTE		16	NDW A#/0001 Q#/0000	3A148330
OCOC O F034		E OR		N7C5	ZERO WITH /0001	3A148340
OCOD O 4C18 OC12		BSC	L	G7C6.E-	BRANCH ON ZERO	3A148350
OCOF 0 4400 0F69		BSI	Ĺ	F000	M /FFFFX/FFFF Q REG FAILED	34140340
OC11 O 3122		DC.	-	/3122	ERR ID	
0C12 0 4400 0FC4	G7C6	BSI	L	F005	CK LOCK ON ERROR	3A148370
	61.00		L			3A148380
9C14 0 70EC		MDX		A7C4	LOOP	3 <b>A148390</b>
2515 2 222			***		************	3 <b>A148400</b>
OC15 O CO2C	A7C8	LD		N7C6	LD /0000	3A148410
OC16 O A029		M		N7C4	M /FFFF	3A148420
OC17 O 4C18 OC1C		BSC	L	G7C8,&-	BRANCH ON ZERO	3A148430
OC19 O 4400 OF69		BSI	L	F000	M /FFFFX/0000 ACC FAILED	3A148440
OC18 O 3123		DC		/3123	ERR ID	3A148450
OC1C 0 4400 0F98	G7C8	851	L	FOOE	CK LOCK ON ERROR	
OC1E O 70F6	0100	MDX		A7C8		3A148460
		_			LOOP	3A148470
OC1F O 18DO		RTE		16	NOW A#/0000 Q#/0000	3A148480
OC20 O 4C18 OC25		BSC	L	G7CA,&-	BRANCH ON ZERO	3 <b>A148490</b>
OC22 O 4400 OF69		BSI	L	F000	M /FFFFX/0000 Q REG FAILED	3A148500
0C24 0 3124		DC		/3124	ERR ID	3A148510
OC25 O 4400 OFC4	G7CA	BSI	L	F005	CK LOCK ON ERROR	3A148520
0C27 0 70ED		MDX	•	A7C8	LOOP	3A148530
002. 0 .025	****				*****	
OC28 O CO17						3A148540
· · · · · · · · · · · · · · · · · · ·	A7CC	LD		N7C4	LD /FFFF	3A148550
OC29 O A018		M		N7C6	M /0000	3A148560
OC2A O 4C18 OC2F		BSC	L	G7CC,&-	BRANCH ON ZERO	3A148570
OC2C O 4400 OF69		BSI	L	F000	M /0000X/FFFF ACC FAILED	3A148580
OC2E O 3125		DC		/3125	ERR ID	3A148590
OC2F O 4400 OF98	G7CC	BSI	L	FOOE	CK LOCK ON ERROR	3A148600
0C31 0 70F6		MDX	_	A7CC	LOOP	3A148610
OC32 O 18DO		RTE		16	NOW A#/0000 Q#/0000	3A148620
0C33 0 4C18 0C38		BSC		G7CE.E-	- · · · · · · · · · · · · · · · · · · ·	
0C35 0 4C18 0C38			Ļ		BRANCH DN ZERO	3A148630
		BSI	L	F000	M /0000X/FFFF Q REG FAILED	
OC37 O 3126		DC	L	/3126	ERR ID	3A148640 3A148650
0C37 0 3126 0C38 0 4400 0FC4	G7CE		L			
OC37 O 3126	G7CE	DC	_	/3126	ERR ID	3A148650
0C37 0 3126 0C38 0 4400 0FC4	G7CE	DC BSI	_	/3126 F005 A7CC	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007		DC BSI MDX MDX	_	/3126 F005 A7CC A800	ERR ID CK LOCK ON ERROR	3A148650 3A148660 3A148670 3A148680
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555	N7CO	DC BSI MDX MDX DC	_	/3126 F005 A7CC A800 /5555	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA	N7C0 N7C1	DC BSI MDX MDX DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38	N7C0 N7C1 N7C2	BSI MDX MDX DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700 3A148710
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72	N7C0 N7C1 N7C2 N7C3	DC BSI MDX MDX DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700 3A148710 3A148720
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF	N7C0 N7C1 N7C2 N7C3 N7C4	DC BSI MDX MDX DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700 3A148710
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72	N7C0 N7C1 N7C2 N7C3	DC BSI MDX MDX DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700 3A148710 3A148720
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF	N7C0 N7C1 N7C2 N7C3 N7C4	DC BSI MDX MDX DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF	ERR ID CK LOCK ON ERROR LOOP	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700 3A148710 3A148720 3A148730 3A148740
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001	N7C0 N7C1 N7C2 N7C3 N7C4 N7C5	DC BSI MDX MDX DC DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A148650 3A148660 3A148670 3A148680 3A148690 3A148710 3A148710 3A148720 3A148730 3A148750
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001	N7C0 N7C1 N7C2 N7C3 N7C4 N7C5	DC BSI MDX MDX DC DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A148650 3A148660 3A148670 3A148690 3A148700 3A148710 3A148720 3A148730 3A148740 3A148750 3A148760
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001	N7C0 N7C1 N7C2 N7C3 N7C4 N7C5 N7C6	DC BSI MDX MDX DC DC DC DC DC	_	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A148650 3A148660 3A148670 3A148680 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148750 3A148750 3A148770
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001	N7C0 N7C1 N7C2 N7C3 N7C4 N7C5 N7C6	DC BSI MDX MDX DC DC DC DC DC DC	L	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION	3A148650 3A148660 3A148660 3A148680 3A148690 3A148700 3A148720 3A148730 3A148740 3A148760 3A148760 3A148760 3A148770
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7C0 N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ********	DC BSI MDX MDX DC DC DC DC DC DC		/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION	3A148650 3A148660 3A148670 3A148680 3A148700 3A148710 3A148720 3A148730 3A148740 3A148750 3A148770 3A148770 3A148770 3A148780
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7C0 N7C1 N7C2 N7C3 N7C4 N7C5 * * *	DC BSI MDX MDX DC DC DC DC DC DC +******		/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION	3A148650 3A148660 3A148670 3A148680 3A148700 3A148710 3A148720 3A148730 3A148740 3A148750 3A148760 3A148770 3A148780 3A148780 3A148800
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ********	DC BSI MDX MDX DC	***	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148760 3A148770 3A148780 3A1488800 3A148800 3A148800
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * *******	DC BSI MDX DC	L ************************************	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148680 3A148690 3A148710 3A148720 3A148730 3A148740 3A148760 3A148760 3A148780 3A148780 3A148880 3A148880 3A148800 3A148800 3A148820
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * *******	DC BSI MDX DC	L ************************************	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION	3A148650 3A148660 3A148660 3A148680 3A148690 3A148710 3A148720 3A148730 3A148740 3A148760 3A148760 3A148780 3A148780 3A148880 3A148880 3A148800 3A148800 3A148820
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * *******	DC BSI MDX DC	L ************************************	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  REMARKS ID&SEQ# AT RIGHT	3A148650 3A148660 3A148660 3A148680 3A148690 3A148700 3A148710 3A148720 3A148750 3A148760 3A148760 3A148760 3A148780 3A1488800 3A148800 3A148820 3A148830
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC DC DC DC DC DC DC ATTOM ATTO	L **** FT ***	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  REMARKS ID&SEQ# AT RIGHT  SET C AND OF OFF	3A148650 3A148660 3A148660 3A148680 3A148690 3A148700 3A148710 3A148720 3A148730 3A148740 3A148760 3A148770 3A148780 3A148890 3A148800 3A148800 3A148800 3A148800 3A148820 3A148840
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	:*** FT ****	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148680 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148760 3A148760 3A148780 3A148800 3A148810 3A148800 3A148800 3A148820 3A148820 3A148830
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	**** FT ***	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  REMARKS ID&SEQ# AT RIGHT  SET C AND OF OFF LD A#/4000 Q#/7FFF D /8000	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148760 3A148770 3A148770 3A148780 3A148800 3A148810 3A148820 3A148820 3A148840 3A148860
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	*** F** L.L.	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST (	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148760 3A148770 3A148780 3A148880 3A148800 3A148800 3A148800 3A148800 3A148800 3A148800 3A148850 3A148850 3A148850 3A148860
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	*** FT***	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148760 3A148760 3A148780 3A148870 3A148800 3A148800 3A148840 3A148840 3A148840 3A148850 3A148860 3A148860 3A148860
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	*** F** L.L.	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148680 3A148690 3A148700 3A148710 3A148720 3A148740 3A148750 3A148760 3A148760 3A148780 3A148880 3A148810 3A148810 3A148840 3A148840 3A148850 3A148860 3A148860 3A148870 3A148880 3A148870 3A148880
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	*** FT***	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  OF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148730 3A148750 3A148760 3A148760 3A148780 3A148870 3A148800 3A148800 3A148840 3A148840 3A148840 3A148850 3A148860 3A148860 3A148860
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	*** F** LLLLL	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148680 3A148690 3A148700 3A148710 3A148720 3A148740 3A148750 3A148760 3A148760 3A148780 3A148880 3A148810 3A148810 3A148840 3A148840 3A148850 3A148860 3A148860 3A148870 3A148880 3A148870 3A148880
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ******************************	DC BSI MDX DC	*** F** L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148670 3A148690 3A148700 3A148710 3A148720 3A148770 3A148770 3A148770 3A148770 3A148780 3A148890 3A148890 3A148890 3A148890 3A148890 3A148890 3A148890 3A148890
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * * * * * * * * * * * * * * * * *	DC BSI MDX DC	*** F** LLLLL	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148770 3A148770 3A148770 3A148770 3A148780 3A148800 3A148800 3A148820 3A148840 3A148850 3A148860 3A148870 3A148870 3A148890 3A148900 3A148900 3A148910 3A148920
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ******************************	DC BSI MDX DC	*** F** L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148680 3A148690 3A148700 3A148710 3A148720 3A148750 3A148760 3A148770 3A148770 3A148780 3A148800 3A148800 3A148840 3A148840 3A148850 3A148860 3A148860 3A148890 3A148890 3A148890 3A148990 3A148900 3A148910 3A148910
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ******************************	DC BSI MDX DC	. *** F** L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L.L	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148670 3A148700 3A148710 3A148720 3A148730 3A148770 3A148760 3A148770 3A148780 3A148780 3A148880 3A148840 3A148840 3A148840 3A148840 3A148860 3A148860 3A148860 3A148890 3A14890 3A14890 3A14890 3A14890 3A14890 3A148920 3A148920 3A148940
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ******************************	DC BSI MDX DC	** F** LLLLL L	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148670 3A148690 3A148700 3A148710 3A148720 3A148750 3A148760 3A148770 3A148770 3A148780 3A148870 3A148880 3A148880 3A148880 3A148880 3A148890 3A148890 3A148990 3A148990 3A148990 3A148990 3A148990 3A148990
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ******************************	DC BSI MDX DC	*** F** LLLLL L LL	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148660 3A148690 3A148700 3A148710 3A148720 3A148770 3A148770 3A148770 3A148770 3A148780 3A148890 3A148800 3A148880 3A148880 3A148880 3A148880 3A148880 3A148890 3A148890 3A148890 3A148990 3A148990 3A148990 3A148990 3A148990 3A148990 3A148990 3A148990
0C37 0 3126 0C38 0 4400 0FC4 0C3A 0 70ED 0C3B 0 7007 0C3C 0 5555 0C3D 0 2AAA 0C3E 0 0E38 0C3F 0 9C72 0C40 0 FFFF 0C41 0 0001 0C42 0 0000  ******************************	N7CO N7C1 N7C2 N7C3 N7C4 N7C5 N7C6 * * * ******************************	DC BSI MDX DC	** F** LLLLL L	/3126 F005 A7CC A800 /5555 /2AAA /0E38 /9C72 /FFFF /0001 /0000 TEST ( ************************************	ERR ID CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE  DF DIVIDE OPERATION  ***********************************	3A148650 3A148660 3A148670 3A148690 3A148700 3A148710 3A148720 3A148750 3A148760 3A148770 3A148770 3A148780 3A148870 3A148880 3A148880 3A148880 3A148880 3A148890 3A148890 3A148990 3A148990 3A148990 3A148990 3A148990 3A148990

DATE 02JAN66 01MAY66 15NOV66 15FEB68 26AUG68 EC NO. 415490 415490C 419643 420403 420403A

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

CPU FUNCTION TEST

DATE

EC NO.

0C5B	0	3128			OC		/3128	ERR ID	3A148980
			0F98	G802	BSI	L	F00E	CK LOCK ON ERROR	3A148990
0C5E					MDX			LOOP	3A149000
OC5F					LD		N7C6	LD /0000	3A149010
		4C18			BSC			BRANCH ON ZERO	3A149020
		4C04				L	•	BR ON NOT EVEN	3A149030
		4400	0169		BSI	L		CARRY ON	3A149040
0066		4400	0504		DC BSI	L	/3129 F005	ERR ID	3A149050 3A149060
0069			UFC4		MDX	L	A800	CK LOCK ON ERROR	3A149070
0C6A					MDX		A806	EXIT TO NEXT ROUTINE	3A149080
		4400	0F69	H804	BSI		F000	OVFLO ON	3A149090
0C6D					DC	•		ERR ID	3A149100
		4400	OFC4	GE04	BSI	L	F005	CK LOCK ON ERROR	3A149110
<b>0C70</b>	0	70D2			MDX		A800	LOOP	3A149120
				****	*****	***	*********	*******	3A149130
OC71				A806			N804	LD A#/1C71 Q#/BBE3	3A149140
		AC OO	OCF3		D	L	N813	D /5555	3A149150
OC74	-				STS		N800	STORE C AND OF CONDITION	3A149160
0075					EOR		N813	ZERO WITH /55555	3A149170
		4C18				L		BRANCH ON ZERO	3A149180
0C7A		4400	01-69		BSI	L		DVD-A REG INCORRECT	3A149190
	-	4400	0500	G806	DC			ERR ID	3A149200 3A149210
0C7D			UF 70	GOUD	WDX	L	F00E A806	CK LOCK ON ERROR	3A149220
OC7E	_				RTE		16	NDW A#/BBE3 Q#/0000	3A149230
OC7F					EOR			ZERO WITH /2DAA	3A149240
		4C18	0085			L		BRANCH ON ZERO	3A149250
		4400			BSI	ī	F000	DVD-Q REG INCORRECT	3A149260
0084	0	312C			DC		/312C	ERR ID	3A149270
0085	0	4400	0F98	G808	851	Ł	FOOE	CK LOCK ON ERROR	3A149280
0087	0	70E9			MDX			LOOP .	3A149290
0C88	0	C058			LD		N800	LD C AND OF CONDITION	34149300
		4C18			BSC	L	G80A.E-	BRANCH ON ZERO	3A149310
		4C04			BSC		H80A, E	BR IF NOT EVEN	3A149320
		4400	<b>0</b> F69		BSI	L		CARRY DN	3A149330
OCBF					DC		/312D	ERR ID	3A149340
		4400	UFC4			L	F005	CK LOCK ON ERROR	3A149350
0C92 0C93					MDX			LOOP	3A149360
		4400	0540	HSOA	MDX BSI		A80C F000	EXIT TO NEXT ROUTINE OVFLO ON	3A149370 3A149380
0096			01 0 7	HOUR	DC	-		ERR ID	3A149390
			OFC4	GBOA		L		CK LOCK ON ERROR	3A149400
0099			0.04	50 <b>0</b> A	MDX	-	A806	LOOP	3A149410
				*****		****		*******	3A149420
****	**1	****	******	*****	*****	***	*********	**************	
CORE		DATA	N OR	*LA- (	OPER-				3A149440
ADDR		INST	RUCTION	*BEL	ATION	FT	OPERANDS &	REMARKS ID&SEQ# AT RIGHT	3A149450
			*******			***		**************	
0C9A				A80C	LDS		0	SET C AND OF OFF	3A149470
0098					LDD		N806	SET A#/0000 Q#/0001	3A149480
0090			00 42		D B S C		N80E	D /0000	3A149490
		4C01 4400		нвос	BSC BSI	L	G80C,0 F000	BRANCH ON OVERFLOW	3A149500
OCAL			01 09	HOUC	DC	L	/312F	DYD BY 0- OFL OFF ERR ID	3A149510
		4400	OFC4	G80C	BSI	L	F005	CK LOCK ON ERROR	3A149520 3A149530
OCA4			<del>-</del> -		MDX	-	A80C	LOOP	3A149540
OCA5					RTE		16	SWAP A AND Q	3A149550
OCA6					EOR		N807	ACC S/B /0000	3A149560
OCA7	0	4C 20	OC9F		BSC	L	1180C + Z	BCH UNLESS ZERO	3A149570
						***	*********	********	3A149580
OCA9				ABOE	LDS		0	SET C AND DF OFF	3A149590
OCAA					LDD		N808	LD A#/4000 Q#/0000	3A149600
OCAB					D	_	N807	D /0001	3A149610
		4C01			BSC	L	G80E,0	BRANCH ON OVERFLOW	3A149620
		4400	UF 07		BSI	L	F000	DVD-BY 1-OVRFLW OFF	3A149630
		3130 4400	0504	CRAE	DC		/3130	ERR ID	3A149640
0001	U	~ <del>~</del> 00	UFL#	G80E	BSI	L	F005	CK LOCK ON ERROR	3A149650

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

415490 415490C 419643 420403 420403A

OCB3 0 70F5		MDX		ABOE	LOOP	3A149660
	****	****	***	********	*******	3A149670
OC84 0 2000	8800	LDS		0	SET C AND OF DEF	3A149680
OCB5 0 C834		LDD		N80A	LD A#/A000 Q#/0000	3A149690
OCB6 0 A831		D		N808	D /4000	3A149700
OCB7 0 4CO1 OCBC		-		J800,D	BRANCH ON OVERFLOW	
						3A149710
OCB9 0 4400 OF69		BSI	L		DVD/4000-OVRFLW OFF	3A149720
OCBB 0 3131		DC		/3131	ERR ID	3A149730
OCBC 0 4400 OFC4	J800		Ł	F005	CK LOCK ON ERROR	3A149740
OCBE 0 70F5		MDX		8800	LOOP	3A149750
	****	****	***	*******	******	3A149760
OCBF 0 2000	8802	LDS		0	SET C AND OF OFF	3A149770
OCCO O C82B		LDD		N80C	LD A#/C000 Q#/0000	3A149780
OCC1 0 A830		D		N812	D /8000	3A149790
OCC2 0 4CO1 OCC7		BSC	1	J802,0	BR ON OF	
OCC4 0 4400 OF69		BSI	_			3A149800
0CC6 0 3132			L		DVD/8000-OVRFLW OFF	3A149810
		DC		/3132	ERR ID	3A149820
OCC7 0 4400 OFC4	J802		L	F005	CHECK LOOP SWITCH	3A149830
OCC9 0 70F5		MDX		B802	LOOP	3A149840
	****	****	***	*******	*******	3A149850
OCCA 0 2000	B804	LDS		0	SET C AND OF OFF	3A149860
OCCB 0 C822		LDD		N80E	LD A#/0000 Q#/FFFF	3A149870
OCCC O A81A		D		N807	D /0001	3A149880
OCCD 0 4C01 OCD2		BSC		J804.0	BR ON OF	3A149890
OCCF 0 4400 0F69		BSI		•		
OCD1 0 3133			L		DVD/0001-OVRFLW OFF	3A149900
	1004	DC		/3133	ERR ID	3A149910
OCD2 0 4400 OFC4	J804		L		CK LOCK ON ERROR	3A149920
OCD4 0 70F5		MDX		B804	LOOP	3 <b>A14993</b> 0
				********	*******	3A149940
OCD5 0 2000	B806	LDS		0	SET C AND OF OFF	3 <b>A149950</b>
OCD6 0 C819		LDD		N810	LD A#/FFFF Q#/7FFF	3A149960
OCD7 0 A80F		D		N807	D /0001	3A149970
OCD8 0 4C01 OCDD		BSC	L		BR ON OF	3A149980
OCDA 0 4400 0F69		BSI		•	DVD/0001-OVRFLW OFF	3A149990
OCDC 0 3134		00	٠.			
		UL		/3134	ERR ID	3A150000
	100/					
OCDD 0 4400 OFC4	J806	BSI	L	F005	CK LOCK ON ERROR	3A150010
OCDD 0 4400 OFC4 OCDF 0 70F5	J806	MDX	L	F005 B806	CK LOCK ON ERROR LOOP	3A150010 3A150020
OCDD 0 4400 OFC4 OCDF 0 70F5 OCEO 0 7023	J806		L	F005	CK LOCK ON ERROR LOOP	3A150010 3A150020
OCDD 0 4400 OFC4 OCDF 0 70F5	J806 N800	MDX	L	F005 B806	CK LOCK ON ERROR	3A150010 3A150020
OCDD 0 4400 OFC4 OCDF 0 70F5 OCEO 0 7023		MDX MDX	L E	F005 8806 8807	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000	N800	MDX MDX DC BSS		F005 B806 B807 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000		MDX MDX DC BSS DC		F005 B806 B807 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF	N800 N802	MDX MDX DC BSS DC DC		F005 B806 B807 /0000 /4000 /7FFF	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71	N800	MDX MDX DC BSS DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070 3A150080
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0 4000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3	N800 N802 N804	MDX MDX DC BSS DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070 3A150080 3A150090
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000	N800 N802 N804 N806	MDX MDX DC BSS DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070 3A150080 3A150090 3A150100
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001	N800 N802 N804 N806 N807	MDX MDX DC BSS DC DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070 3A150080 3A150090 3A150100
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000	N800 N802 N804 N806	MDX MDX DC BSS DC DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150080 3A150090 3A150100 3A150110
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0 4000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 8BE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000	N800 N802 N804 N806 N807	MDX MDX DC BSS DC DC DC DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070 3A150080 3A150090 3A150100
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCE9 0 0000	N800 N802 N804 N806 N807	MDX MDX DC BSS DC DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /4000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150080 3A150090 3A150100 3A150110
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0 4000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 8BE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000	N800 N802 N804 N806 N807 N808	MDX MDX DC BSS DC DC DC DC DC DC DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150070 3A150090 3A150100 3A150110 3A150120 3A150130
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0 4000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000	N800 N802 N804 N806 N807 N808	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /4000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150070 3A150080 3A150090 3A150100 3A150110 3A150120 3A150130 3A150140
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000	N800 N802 N804 N806 N807 N808	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /C000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150130 3A150130 3A150150
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCEC 0 C000	N800 N802 N804 N806 N807 N808 N80A	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150110 3A150110 3A150120 3A150140 3A150140 3A150160 3A150160
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEB 0 0000 OCED 0 0000 OCED 0 0000	N800 N802 N804 N806 N807 N808 N80A N80C	MDX MDX DC BSSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /0000 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150130 3A150140 3A150150 3A150160 3A150170 3A150170
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 0 4000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCEC 0 0000 OCEC 0 FFFF	N800 N802 N804 N806 N807 N808 N80A N80C	MDX MDX DC BSSS DC		F005 B806 B807 /0000 /7FFF /1C71 /BBE3 /0000 /0000 /4000 /0000 /0000 /0000 /0000 /0000 /FFFF	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150070 3A150080 3A150090 3A150100 3A150110 3A150120 3A150130 3A150140 3A150150 3A150160 3A150160 3A150180 3A150190
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE8 0 4000 OCEB 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCED 0 0000 OCEC 0 FFFF	N800 N802 N804 N806 N807 N808 N80A N80C	MDX MDX DC BSS DC		F005 B806 B807 /0000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /0000 /FFFF /FFFF	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150070 3A150080 3A150090 3A150100 3A150110 3A150120 3A150140 3A150140 3A150160 3A150170 3A150170 3A150190 3A150190
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCEC 0 C000 OCEC 0 FFFF OCF0 0 FFFF	N800 N802 N804 N806 N807 N808 N80C N80C N80C N80F N810 N311	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /0000 /0000 /FFFF /FFFF	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150110 3A150110 3A150120 3A150140 3A150140 3A150160 3A150160 3A150180 3A150180 3A150190 3A150210
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCEC 0 C000 OCEC 0 FFFF OCF0 0 FFFF OCF1 0 7FFF	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /4000 /0000 /0000 /0000 /0000 /0000 /FFFF /FFFF /8000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150110 3A150120 3A150120 3A150140 3A150140 3A150160 3A150170 3A150170 3A150190 3A150200 3A150200 3A150220
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OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCED 0 0000 OCEC 0 C000 OCED 0 TFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /4000 /0000 /0000 /0000 /0000 /0000 /FFFF /FFFF /8000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150050 3A150060 3A150070 3A150090 3A150100 3A150110 3A150120 3A150130 3A150140 3A150160 3A150160 3A150160 3A150190 3A150200 3A150210 3A150210 3A150220 3A150230 3A150240
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEB 0 0000 OCEB 0 0000 OCEC 0 C000 OCEC 0 C000 OCEC 0 FFFF OCF0 0 FFFF OCF1 0 FFFF OCF2 0 8000 OCF3 0 5555	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812 N813	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /FFFF /FFFF /FFFF /8000 /5555	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150140 3A150150 3A150160 3A150170 3A150180 3A150190 3A150200 3A150200 3A150200 3A150220 3A150220
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCED 0 0000 OCEC 0 C000 OCED 0 TFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812 N813 N816	MDX MDX DC BSS DC		F005 B806 B807 /0000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /0000 /FFFF /FFFF /FFFF /8000 /5555 /2DAA	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150130 3A150140 3A150160 3A150160 3A150180 3A150190 3A150200 3A150210 3A150210 3A150220 3A150220
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEB 0 0000 OCEC 0 C000 OCED 0 0000 OCEF 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF6 0 6100	N800 N802 N804 N806 N807 N808 N80A N80C N80C N80F N810 N311 N812 N813 N816 N817	MDX MDX DC BSS DC		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /0000 /FFFF /FFFF /8000 /5555 /2DAA /C000 /6100	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150140 3A150160 3A150160 3A150160 3A150160 3A150160 3A150200 3A150200 3A150200 3A150220 3A150220 3A150230 3A150250 3A150250
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEB 0 0000 OCEC 0 CO00 OCED 0 0000 OCEF 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 CO00 OCF6 0 6100 OCF7 0 0000	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812 N813 N816 N817 N818	MDX MDX DC BSS DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0001 /4000 /0000 /0000 /0000 /FFFF /8000 /5555 /2DAA /C000 /6100 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150140 3A150140 3A150160 3A150170 3A150180 3A150200 3A150200 3A150200 3A150220 3A150220 3A150220 3A150220 3A150220 3A150220
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 00000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEB 0 0000 OCEB 0 0000 OCEC 0 C000 OCEC 0 C000 OCEC 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF7 0 0000 OCF8 0 8000	N800 N802 N804 N806 N807 N808 N80A N80C N80C N80F N810 N311 N812 N813 N816 N817	MDX MDX DC BSS DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /0000 /0000 /0000 /0000 /FFFF /FFFF /8000 /5555 /2DAA /C000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000 /6000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150120 3A150140 3A150150 3A150160 3A150170 3A150180 3A150190 3A150200 3A150200 3A150200 3A150200 3A150200 3A150250 3A150250 3A150250 3A150250
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 8BE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEB 0 0000 OCED 0 0000 OCED 0 0000 OCED 0 0000 OCED 0 7FFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF6 0 6100 OCF8 0 8000 OCF8 0 8000 OCF8 0 8000 OCF8 0 8000 OCF7 0 0000	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N811 N812 N813 N816 N817 N818	MDX DC SS DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /4000 /0000 /0000 /0000 /FFFF /FFFF /FFFF /FFFF /2DAA /C000 /6100 /8000 /8000 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150070 3A150090 3A150100 3A150110 3A150120 3A150130 3A150150 3A150150 3A150160 3A150170 3A150180 3A150180 3A150200 3A150210 3A150200 3A150210 3A150220 3A150220 3A150220 3A150220 3A150230 3A150240 3A150250 3A150250 3A150260 3A150260 3A150280 3A150280
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 0000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 8BE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCED 0 0000 OCEC 0 C000 OCED 0 0000 OCEF 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF6 0 6100 OCF7 0 0000 OCF8 0 8000 OCF8 0 8000 OCF9 0 0000 OCF9 0 0000 OCF8 0 8000 OCF9 0 0000 OCF9 0 0000 OCF9 0 0000 OCF9 0 0000	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812 N813 N816 N817 N818	MDX DC SS DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /0000 /0000 /0000 /0000 /FFFF /FFFF /8000 /5555 /2DAA /C000 /6100 /0000 /8000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000 /0000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150070 3A150080 3A150090 3A150100 3A150120 3A150130 3A150140 3A150160 3A150160 3A150160 3A150190 3A150200 3A150200 3A150200 3A150220
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 8BE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCED 0 0000 OCEC 0 C000 OCED 0 0000 OCEF 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF6 0 6100 OCF7 0 0000 OCF8 0 8000 OCF7 0 0000 OCF8 0 8000 OCF9 0 0000 OCFA 0 0000 OCFA 0 0000 OCFA 0 0000	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N811 N812 N813 N816 N817 N818	MDX DC SS DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /0000 /0000 /0000 /0000 /FFFF /7FFF /8000 /5555 /2DAA /C000 /6100 /0000 /8000 /0000 /8000 /0000 /8000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150140 3A150160 3A150160 3A150160 3A150160 3A150200 3A150200 3A150200 3A150200 3A150220 3A150220 3A150220 3A150220 3A150230 3A150220 3A150230 3A150280 3A150280 3A150280 3A150280 3A150280 3A150290 3A150290
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 70Z3 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 BBE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCEC 0 C000 OCED 0 0000 OCEC 0 C000 OCEF 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF6 0 6100 OCF7 0 0000 OCF8 0 8000 OCF6 0 6100 OCF7 0 0000 OCF8 0 8000 OCF8 0 8000 OCF8 0 0000 OCF8 0 8000 OCF8 0 0000 OCFB 0 0000 OCFB 0 0000 OCFC 0 2001	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812 N813 N816 N817 N818	MDX MDX DC BSC DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /0000 /0000 /0000 /0000 /FFFF /8000 /5555 /2DAA /C000 /6100 /0000 /8000 /0000 /8000 /0000 /8000 /0000 /2001	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150120 3A150140 3A150160 3A150170 3A150160 3A150170 3A150200 3A150200 3A150200 3A150220 3A150220 3A150220 3A150220 3A150220 3A150220 3A150230 3A150240 3A150250 3A150250 3A150260 3A150270 3A150270 3A150280 3A150290 3A150300 3A150310 3A150310
OCDD 0 4400 OFC4 OCDF 0 70F5 OCE0 0 7023 OCE1 0 0000 OCE2 04000 OCE2 0 4000 OCE3 0 7FFF OCE4 0 1C71 OCE5 0 8BE3 OCE6 0 0000 OCE7 0 0001 OCE8 0 4000 OCE9 0 0000 OCEA 0 A000 OCEB 0 0000 OCED 0 0000 OCEC 0 C000 OCED 0 0000 OCEF 0 FFFF OCF1 0 7FFF OCF2 0 8000 OCF3 0 5555 OCF4 0 2DAA OCF5 0 C000 OCF6 0 6100 OCF7 0 0000 OCF8 0 8000 OCF7 0 0000 OCF8 0 8000 OCF9 0 0000 OCFA 0 0000 OCFA 0 0000 OCFA 0 0000	N800 N802 N804 N806 N807 N808 N80A N80C N80E N80F N810 N311 N812 N813 N816 N817 N818	MDX DC SS DC D		F005 B806 B807 /0000 /4000 /7FFF /1C71 /BBE3 /0000 /0000 /0000 /0000 /0000 /0000 /FFFF /7FFF /8000 /5555 /2DAA /C000 /6100 /0000 /8000 /0000 /8000 /0000 /8000	CK LOCK ON ERROR LOOP EXIT TO NEXT ROUTINE	3A150010 3A150020 3A150030 3A150040 3A150060 3A150060 3A150080 3A150090 3A150100 3A150110 3A150120 3A150140 3A150160 3A150160 3A150160 3A150160 3A150200 3A150200 3A150200 3A150200 3A150220 3A150220 3A150220 3A150220 3A150230 3A150220 3A150230 3A150280 3A150280 3A150280 3A150280 3A150280 3A150290 3A150290

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PROG ID

PAGE

CPU FUNCTION TEST

•						
OCFE O COOO		DC		/C000		3A150340
0D00 0000		BSS	E	0		3A150350
ODOO O FFFF	N823	DC.		/FFFF		3A150360
ODO1 O FFFF		DC		/FFFF		3A150370 3A150380
ODO2 O OOOO	N824	DC		0	STORAGE	3A150390
0D03 0 0000		DC		0	STORAGE	3A150400
	****	****	***	******	*******************************	
				*****		3A150420
CORE DATA OR	*LA-	UPEK-		ODERAN	IDS & REMARKS ID&SEQ# AT RIGHT	
ADDR INSTRUCTION	<b>*</b> 8666.	AIIUN *****	rı est	UPERAL	IDS & REMARKS ID&SEQ# AT RIGHT	3A150440
	B807	LDS		0	SET C AND OF OFF	3A150450
0D04 0 2000	8001	LDD		N818	LD A#/6100 Q#/0000	3A150460
ODO5 O C8FO ODO6 O A8EE		D		N817	D /C000	3A150470
0D07 0 4C01 0D0C		BSC	L		BR ON OF	3A150480
0009 0 4400 0F69		BSI	L	F000	OVERFLOW OFF	3A150490
ODOB 0 316A		DC	_	/316A	ERR ID	3A150500
ODOC 0 4400 OFC4	J808	BSI	L	F005	CK LOCK ON ERROR	3A150510
ODOE 0 70F5		MDX		B807	LOOP	3A150520
	****	****	***	*****	******	3A150530
ODOF 0 2000	B808	LDS		0	SET C AND OF OFF	3A150540
OD10 0 C8E7		LDD		N819	LD A#/8000 Q#/0000	3A150550
OD11 O ABDD		D		N80F	D /FFFF	3A150560 3A150570
OD12 0 4CO1 OD17		BSC	L	J809 •		
OD14 O 4400 OF69		BSI	L	F000	OVERFLOW OFF	3A150580 3A150590
OD16 0 3168		DC		/316B	ERR ID	3A150600
OD17 0 4400 OFC4	J809		L	F005	CK LOCK ON ERROR	3A150610
OD19 O 70F5		MDX		B808	LOOP	3A150620
			***		**************************************	3A150630
OD1A 0 2000	8809	LDS		0	LD A#/FFFF Q#/FFFF	3A150640
ODIB O CBE4		LDD		N823	D /0002	3A150650
ODIC O ASDD		D		N820 J815,		3A150660
ODID 0 4CO1 OD20		BSC MDX	L	J810	OVERFLOW OFF	3A150670
001F 0 7003	J815	BSI	Ł	F000	OFERI COM OI.	3A150680
0D20 0 4400 0F69	3013	DC	_	/316C	ERR ID	3A150690
OD22 0 316C OD23 0 4400 OFC4	J810	BSI	L		CK LOCK ON ERROR	3A150700
0D25 0 70F4	2010	MDX	_	B809	LOOP	3A150710
0023 0 1014	****		***		*******	3A150720
	****	*****	***	*****	******	3A150730
	*					3A150740
	*					3A150750
	*				MULTIPLY-DIV TEST \$88100	3A150760
						3A150770
	•					3A150780
	*				THIS TEST TAKES 4 NUMBERS	3A150790
	*				/8000, /C000, /4000 AND	3A150800 3A150810
	*				/2001 AND MULTIPLIES AND	3A150820
	*				DIVIDES THE RESULT OF THE	3A150830
	*				MULTIPLICATION BY ALL	3A150840
					VALUES OF NEGATIVE AND POSITIVE NUMBERS. THIS	3A150850
	*				PROCEDURE IS REPETED	3A150860
	-				UNTIL ALL FOUR NUMBERS	3A150870
	*				HAVE BEEN USED.	3A150880
	-				10.15 05511 44524	3A150890
	•			STEPI	L SET MULTIPLICAND AND	3A150900
					DIVISOR TO LARGEST NEG.	3A150910
	*				NUMBER.	3A150920
	*			STEP	2 TAKE ONE OF FOUR NUMBERS	3A150930
	*				AND USE IT AS THE	3A150940
	*				MULTIPLIER	3A150950
	*			STEP	MULTIPLY	3A150960
	*			STEP	4 STORE RESULTS IN SYMBOLIC	3A150970
	*				LOCATION N824	3A150980
	• 1				5 DIVIDE	3A150990
				STEP	6 CHECK RESULT	3A151000 3A151010
	*			STEP	7 INCREMENT MULTIPLICAND	SWISIOIA
					·	

					•	
	*			AND D	IVISOR BY 1.	3A151020
	*			STEP8 GO TO	STEP 2 IF ALL	3A151030
	*			VALUE	S HAVE NOT BEEN	3A151040
	*				#2 110E111 E10H1100 11110	3A151050
	*			DIVIS		3A151060
	*				IP FOR NEXT ONE OF 4	3A151070
	*			MULTI	IPLIERS.	3A151080 3A151090
	*			STEP10 GU I	TO STEP 2 IF ALL 4 BERS HAVE NOT BEEN	3A151100
	•					3A151110
	*			USEC	J•	3A151120
	•					3A151130
	•					3A151140
		E	THE	EE WORD 100	CATIONS ARE AVAILABLE FOR	
•	*		MAN	HAL INSERT	ION OF ANY VALUE DESIRED.	3A151160
	*		THE	Y ARE AT LA	ABEL ADDRESS N821&1, N821&2	,3A151170
	*			N82163.		3A151180
	*					3A151190
	* CAU	JTION	**	DO NOT CH	ANGE THE WORD AT LABEL	3A151200
	*			LOCATION	N822 % /800C=.	3A151210
	*					3A151220
******	*****	****	***	*********	*********	3A151230
CORE DATA OR	*LA-	DPER-				3A151240
ADDR INSTRUCTION	*BEL	AT I ON	FT	OPERANDS &	REMARKS IDESEO# AT RIGHT	2 2 1 5 1 2 4 O
					**********	3A151260 3A151270
0D26 0 6104	B810		_	4	LD XR 1 WITH /0004 CK BYPASS MPY/DIV SW	3A151280
OD27 O OCOO OFD2	J814		L		LD SWITCH SETTINGS	3A151290
0D29 0 C400 0FD5		FD	L	2000	SHIFT BIT 7 TO BIT POS 15	
OD2B 0 1808		SRA		8	SK IF BIT 15#0	3A151310
OD2C 0 4804		BSC		E A840	SW BIT 6 ON BBYPASSE	3A151320
OD2D 0 7028		MDX LD		N819	CONST /8000	3A151330
ODZE O COC9 ODZF O DOCB		STO		N821	STORE /8000 AT N821	3A151340
OD30 O COCA	J811			N821	LD CEN821= /8000	3A151350
0D30 0 COCA 0D31 0 A500 0CFB	Joil	M	1.1	N821		3A151360
0D31 0 2500 0C1 D		STD		N824	STORE A AND Q	3A151370
OD34 O 2000		LDS		0	SET C AND OF OFF	3A151380
OD35 0 A8C5		D		N821	D /8000	3A151390
0D36 0 F500 OCFB		EOR	Ll	N821	ZERO WITH /8000	3A151400
OD38 0 4C18 OD3D		BSC	L	J812,&-	BRANCH ON ZERO	3A151410
0D3A 0 4400 0F69		BSI	L	F000	ACC NOT ZERO	3A151420
OD3C 0 316D		DC		/316D	ERR ID	3A151430
OD3D 0 4400 OF98	J812	BSI	L	F00E	CK LOCK ON ERROR	3A151440
OD3F 0 70F0		MDX		J811	LOOP ON MPL/DIV	3A151450 3A151460
0D40 0 18D0		RTE		16	NOW A#/0000 Q#/0000	3A151470
OD41 O 4C18 OD46		BSC	L	J813,6-	BRANCH ON ZERO	3A151480
0D43 0 4400 0F69		BSI	L	F000	REMAINDER IN Q REG	3A151490
0D45 0 316E		DC		/316E	ERR ID CK LOCK ON ERROR	3A151500
0D46 0 4400 OF98	J813		L		LOOP ON MPL/DIV	3A151510
OD48 0 70E7	1017	MDX		J811 N821	LD /8000	3A151520
0D49 0 C0B1	<b>J816</b>	LD		N807	ADD ONE	3A151530
0D4A 0 809C		A STO		N821		3A151540
0048 0 DOAF		BSC	L		BRANCH ON ZERO	3A151550
0D4C 0 4C18 0D49		EOR	-	N819	*	3A151560
OD4E O FOA9 OD4F O 4C2O OD3O		BSC	L		BR IF NOT ZERO	3A151570
0D51 0 71FF		MDX		-1		3A151580
0D52 0 70D4		MDX	_	J814	LOOP TO CK SWITCHES	3A151590
0052 0 7004 0053 0 4400 0FC4		BSI	L		CK LOCK ON ERROR	3A151600
0D55 0 70D0		MDX		8810	LOOP	3A151610
	****	****	***	*******	*******	3A151620
	*					3A151630
	*			TEST	OF MDX OPERATION	3A151640
	*					3A151650 3A151660
					******	3A151600 3A151670
0D56 0 6100	A840	LDX	-	0	LD XR 1 WITH ZERO	3A151680
0D57 0 71FF		MDX		1 -1	SK IF SIGN CHANGES MDX FAILED TO SKIP	3A151690
0D58 0 3000		HAIT	Ī		MAY LAITED IN 2KIL	J-17107 <del>0</del>

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68 DATE 415490 415490C 419643 420403 420403A EC ND.

3A152380

CPU FUNCTION TEST

OD59 O 696D		STX	1	N840	STORE CXXR 1m AT N840	3A151700
0D5A 0 C06C		LD		N84C	LD VALUE OF XR 1	3A151710
0D5B 0 F06C		EOR		N841	ZERO ACC WITH /FFFF	3A151720
OD5C 0 4C18 OD61		RSC.		G840.E-	BRANCH ON ZERO	3A151730
ODSE 0 4400 OF69		RSI	ī	F000	MDX XR 1 FAILED	3A151740
0D60 0 3135		DC.	-	/3135	ERR ID	34151750
		00		73137	CK TOCK ON EBBOD	24151740
0D61 0 4400 OFC4	6840	B21	L	F005	LK LUCK UN EKKUK	24151770
OD63 0 70F2		MDX		A840	LUUP	3A151710
	*****	*****	***	*********	LD VALUE OF XR 1 ZERO ACC WITH /FFFF BRANCH ON ZERO MDX XR 1 FAILED ERR ID CK LOCK ON ERROR LOOP	3A131700
0D64 0 C068	A842	rD.		N845	LD WITH ADDK OF	2M121140
	*				* LABEL N844	3A151800
0D65 0 7401 0DC9		MDX	L	N842,1	BR TO LABEL ADDR N842 &1	3A151810
0D67 0 F065		E OR		N845		3A151820
OD68 O 4C18 OD6D			L	H842-E-	BRANCH ON ZERO	3A151830
OD6A 0 4400 OF69		BSI		F000	ACC DISTROYED AFTER MDX	3A151840
0D6C 0 316F		DC	_	/214E	EDD ID	34151850
••••	4073			N842	ERR ID LD A#/3GOO ACC NOW /0001 BRANCH ON ZERO ADD TO MEM FAILED ERR ID LD /3000 CK LOCK ON ERROR	34151860
0D6D 0 C05B	H842			N042	ACC NOW (000)	24151870
OD6E 0 F05F		EOR		N846	ACC NUM /UUUI	34151610
OD6F 0 4C18 OD74			L	G842,&-	BRANCH ON ZERU	3A151880
0D71 0 4400 0F69		BSI	L	F000	ADD TO MEM FAILED	3A151890
OD73 0 3136		DC		/3136	ERR ID	3A151900
	G842	LD		N843	LD /3000	3A151910
0D74 0 C056 0D75 0 D053		LD STO		N842		34151920
0D76 0 4400 OFC4				F005	CK LOCK ON ERROR	3A151930
		MDX	-	A842	LOOP	3A151940
0D78 0 70EB				4072	*******	3A151950
	****				*******	
			***	****	***************************************	
CORE DATA OR	*LA-	OPER-				3A151970
ADDR INSTRUCTION	ı *BEL .	ATION	FT	OPERANDS &	REMARKS IDESEO# AT RIGHT	3A151980
***********	*****	****	***	*******	**********	3A151990
OD79 O 6600 FFFE	A844	LDX	L2	-2	LD XR 2 WITH -2	3A152000
0078 0 7600 0001		MDX	L2	1	ADD ONE TO XR 2	3A152010
0D7B 0 7600 0001 0D7D 0 6A49		STX	2	N840	STORE XR 2	3A152020
OD7E O CO48		10	_	NO CO	IN UTTH VR 2 VALUE	3A152030
001E 0 C070						
0075 0 5040		E OO		NO-10	TEOD ACC WITH /EEEE	34152040
0D7F 0 F048		EOR		N841	ZERO ACC WITH /FFFF	3A152040
0D80 0 4C18 0D85		E OR BSC	L	N840 N841 G844,&-	ZERO ACC WITH /FFFF BRANCH ON ZERO	3A152040 3A152050
0D80 0 4C18 0D85		BSI	L	F000	MDX LONG XR 2 FAILED	
		EOR BSC BSI DC	L	N841 G844,&- F000 /3137	ERR ID	3A152070
OD80 0 4C18 OD85   OD82 0 4400 OF69 OD84 0 3137		BSI DC	L	F000	HON COND AN E INTEED	
OD80 0 4C18 OD85   OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4	G844	BSI BSI	L	F000 /3137 F005	ERR ID CK LOCK ON ERROR	3A152070
OD80 0 4C18 OD85   OD82 0 4400 OF69 OD84 0 3137	G844	BSI BSI	L	F000 /3137 F005	ERR ID CK LOCK ON ERROR	3A152070 3A152080 3A152090
OD80 0 4C18 OD85   OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1	G844 ****	BSI DC BSI MDX	L L ***	F000 /3137 F005 A844 ******	ERR ID CK LOCK ON ERROR LOOP	3A152070 3A152080 3A152090 3A152100
OD80 0 4C18 OD85   OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1 OD88 0 63FF	G844	BSI DC BSI MDX *****	L L ***	F000 /3137 F005 A844 *******	ERR ID  CK LOCK ON ERROR  LOOP  LOOP  LO P 3 MITH -1	3A152070 3A152080 3A152090 3A152100 3A152110
OD80 0 4C18 OD85   OD82 0 4400 OF69   OD84 0 3137   OD85 0 4400 OFC4   OD87 0 70F1   OD88 0 63FF   OD89 0 7301	G844 ****	BSI DC BSI MDX ***** LDX MDX	L L ***	F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120
OD80 0 4C18 OD85   OD82 0 4400 OF69   OD84 0 3137   OD85 0 4400 OFC4   OD87 0 70F1   OD88 0 63FF   OD89 0 7301   OD8A 0 7001	G844 ****	BSI DC BSI MDX ***** LDX MDX MDX	L L ***	F000 /3137 F005 A844 **********************************	ERR ID  CK LOCK ON ERROR  LOOP  LOOP  LO P 3 MITH -1	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130
OD80 0 4C18 OD85   OD82 0 4400 OF69   OD84 0 3137   OD85 0 4400 OFC4   OD87 0 70F1   OD88 0 63FF   OD89 0 7301   OD8A 0 7001   OD8B 0 7003   OD8B 0 7003	G844 ***** A846	BSI DC BSI MDX ***** LDX MDX MDX MDX MDX	L *** 3 3	F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140
OD80 0 4C18 OD85   OD82 0 4400 OF69   OD84 0 3137   OD85 0 4400 OFC4   OD87 0 70F1   OD88 0 63FF   OD89 0 7301   OD8A 0 7001	G844 ***** A846	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI	L *** 3 3	F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152130 3A152130
OD80 0 4C18 OD85   OD82 0 4400 OF69   OD84 0 3137   OD85 0 4400 OFC4   OD87 0 70F1   OD88 0 63FF   OD89 0 7301   OD8A 0 7001   OD8B 0 7003   OD8B 0 7003	G844 ***** A846	BSI DC BSI MDX ***** LDX MDX MDX MDX MDX	L *** 3 3	F000 /3137 F005 A844 **********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140
OD80 0 4C18 OD85   OD82 0 4400 OF69   OD84 0 3137   OD85 0 4400 OFC4   OD87 0 70F1   OD88 0 63FF   OD89 0 7301   OD8A 0 7001   OD8B 0 7003   OD8C 0 4400 OF69	G844 ***** A846 G846	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC	L *** 3 3	F000 /3137 F005 A844 **********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152130 3A152130
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1 OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4	G844 ***** A846 G846 H846	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC BSI MDX	L *** 3 3	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140 3A152140 3A152150 3A152160
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1 OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8A 0 7003 OD8C 0 4400 OF69 OD8E 0 3138	G844 ***** A846 G846 H846	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC BSI MDX	L *** 3 3	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140 3A152150 3A152160 3A152170
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6	G844 **** A846  G846 H846 ****	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX	L 3 3	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152130 3A152140 3A152150 3A152150 3A152170 3A152170
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1 OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6	G844 ***** A846 G846 H846	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX ******	L *** 3 3 L L	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152120 3A152120 3A152120 3A152130 3A152140 3A152150 3A152160 3A152180 3A152180 3A152180 3A152190 3A152200
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104	G844 **** A846  G846 H846 ****	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX ******	L *** 3 3 L L	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140 3A152150 3A152160 3A152170 3A152180 3A152190 3A152200 3A152210
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001	G844 **** A846  G846 H846 ****	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI DC BSI DC BSI DX MDX MDX	L *** 3 3 L L	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140 3A152150 3A152160 3A152170 3A152180 3A152180 3A152200 3A152200 3A152210 3A152220
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003	G844 ***** A846 G846 H846 *****	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC BSI MDX ****** MDX MDX	**** 3 3 L L **** 1 1	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152120 3A152130 3A152140 3A152150 3A152170 3A152170 3A1522180 3A152220 3A152220 3A152220 3A152220
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69	G844 **** A846  G846 H846 ****	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX ***** MDX MDX MDX BSI MDX	**** 3 3 L L **** 1 1	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152150 3A152170 3A152170 3A152180 3A1522190 3A152220 3A152220 3A152220 3A152220 3A152220
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003	G844 ***** A846  G846 H846 *****	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC BSI MDX ****** MDX MDX	**** 3 3 L L **** 1 1	F000 /3137 F005 A844 ***********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152120 3A152120 3A152120 3A152130 3A152140 3A152140 3A152160 3A152180 3A152180 3A152180 3A152210 3A152220 3A152220 3A152220 3A152220 3A152220 3A152230 3A152250
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69	G844 ***** A846  G846 H846 *****	BSI DC BSI MDX ***** LDX MDX MDX MDX MDX BSI DC BSI DC BSI DC BSI DX MDX MDX MDX MDX MDX MDX MDX MDX MDX	L 3 3 L L	F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152150 3A152170 3A152170 3A152180 3A1522190 3A152220 3A152220 3A152220 3A152220 3A152220
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139	G844  **** A846  G846  H846  **** A848  G848  H848	BSI DC BSI MDX ****** LDX MDX MDX BSI DC BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	: 3 3 1 1 1	F000 /3137 F005 A844 ***********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152120 3A152120 3A152120 3A152130 3A152140 3A152140 3A152160 3A152180 3A152180 3A152180 3A152210 3A152220 3A152220 3A152220 3A152220 3A152220 3A152230 3A152250
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OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4400 OFC4	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX ***** MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX		F000 /3137 F005 A844 ***********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152120 3A152140 3A152140 3A152170 3A152170 3A152180 3A152210 3A152220 3A152220 3A152220 3A152220 3A152220 3A152220 3A152220 3A152220 3A152220
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4430 OFC4 OD98 0 70F6  OD9C 0 6500 FFFE	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX ***** MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX		F000 /3137 F005 A844 ***********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152110 3A152120 3A152130 3A152130 3A152140 3A152150 3A152160 3A152170 3A152180 3A152190 3A152200 3A152200 3A152200 3A152250 3A152260 3A152260 3A152270
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD96 0 4400 OF69 OD98 0 3139 OD96 0 4400 OFC4 OD9B 0 70F6  OD9C 0 6500 FFFE OD9E 0 COFF	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC BSI DC BSI DC BSI DC BSI LDX MDX MDX MDX MDX MDX LDX LDX LDX LDX LDX LDX LDX LDX LDX L		F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152180 3A152180 3A152180 3A152210 3A152220 3A152220 3A152220 3A152220 3A152220 3A152220 3A152230 3A152280 3A152280 3A152280 3A152280 3A152280
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4400 OF69 OD98 0 3139 OD99 0 4400 OFC4 OD98 0 70F6  OD9C 0 6500 FFFE OD9F 0 7580 ODCD	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX MDX BSI DC BSI DC BSI DC BSI DX MDX MDX MDX MDX MDX MDX MDX MDX MDX		F000 /3137 F005 A844 **********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152120 3A152120 3A152120 3A152130 3A152140 3A152140 3A152180 3A152180 3A152180 3A152210 3A152220 3A152220 3A152220 3A152220 3A152230 3A152250 3A152250 3A152250 3A152280 3A152280 3A152280 3A152280
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4400 OF69 OD98 0 3139 OD99 0 4400 OFC4 OD98 0 70F6  OD9C 0 6500 FFFE OD9F 0 7580 ODCD ODA1 0 6925	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX ***** MDX MDX BSI MDX MDX BSI MDX MDX BSI DC SI MDX MDX MDX MDX MDX MDX MDX BSI DC BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX		F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152130 3A152130 3A152140 3A152150 3A152160 3A152180 3A152180 3A152210 3A152220 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152230 3A152230 3A152230 3A152230 3A152230
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8A 0 7001 OD8B 0 3138 OD8C 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD96 0 4400 OF69 OD98 0 3139 OD96 0 5500 OFFF OD9F 0 7580 ODCD ODA1 0 6925 ODA2 0 F0FB	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX BSI MDX MDX BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	L **** 3 3 L L L L L L L L L L L L L L L	F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152110 3A152120 3A152130 3A152140 3A152140 3A152170 3A152180 3A1522180 3A1522180 3A1522180 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152230 3A152330 3A152330 3A152330
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4400 OF69 OD98 0 70F6  OD9C 0 6500 FFFE OD9F 0 7580 ODCD ODA1 0 6925 ODA2 0 FOFB ODA3 0 4C18 ODA8	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI MDX BSI MDX BSI MDX BSI MDX MDX BSI MDX MDX BSI BSI MDX BSI MDX BSI BSI MDX BSI BSI MDX BSI	L **** 3 3 L L **** L1 1 1 1 1 L L	F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152170 3A152180 3A1522170 3A1522170 3A1522170 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152230 3A152230 3A152230 3A152230 3A152340 3A152340
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8A 0 7001 OD8B 0 3138 OD8C 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD96 0 4400 OF69 OD98 0 3139 OD96 0 5500 OFFF OD9F 0 7580 ODCD ODA1 0 6925 ODA2 0 F0FB	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI MDX BSI MDX MDX BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	L **** 3 3 L L L L L L L L L L L L L L L	F000 /3137 F005 A844 **********************************	ERR ID CK LOCK ON ERROR LOOP **********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152170 3A152180 3A1522170 3A1522170 3A1522170 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152230 3A152230 3A152230 3A152230 3A152340 3A152340
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4400 OF69 OD98 0 70F6  OD9C 0 6500 FFFE OD9F 0 7580 ODCD ODA1 0 6925 ODA2 0 FOFB ODA3 0 4C18 ODA8	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI MDX BSI MDX BSI MDX BSI MDX MDX BSI MDX MDX BSI BSI MDX BSI MDX BSI BSI MDX BSI BSI MDX BSI	L **** 3 3 L L **** L1 1 1 1 1 L L	F000 /3137 F005 A844 **********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152170 3A152180 3A1522170 3A1522170 3A1522170 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152230 3A152230 3A152230 3A152230 3A152340 3A152340
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OF69 OD8E 0 3138 OD8F 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD96 0 4400 OFC4 OD9B 0 70F6  OD9C 0 6500 FFFE OD9E 0 COFF OD9F 0 7580 ODCD ODA1 0 6925 ODA2 0 FOFB ODA3 0 4C18 ODA8 ODA5 0 4400 OF69	G844 ***** A846  G846 H846 ***** A848  G848 H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI C BS	L **** 3 3 L L **** L1 1 1 1 1 L L	F000 /3137 F005 A844 **********************************	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152090 3A152100 3A152120 3A152120 3A152130 3A152140 3A152140 3A152150 3A152170 3A152180 3A1522170 3A152210 3A152220 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152230 3A152230 3A152230 3A152330 3A152330 3A152330 3A152330 3A152330 3A152330
OD80 0 4C18 OD85 OD82 0 4400 OF69 OD84 0 3137 OD85 0 4400 OFC4 OD87 0 70F1  OD88 0 63FF OD89 0 7301 OD8A 0 7001 OD8B 0 7003 OD8C 0 4400 OFC4 OD91 0 70F6  OD92 0 61FF OD93 0 7104 OD94 0 7001 OD95 0 7003 OD96 0 4400 OF69 OD98 0 3139 OD99 0 4400 OFC4 OD98 0 3139 OD99 0 4400 OFC4 OD98 0 70F6  OD9C 0 6500 FFFE OD9E 0 COFF OD9F 0 7580 ODCD ODA1 0 6925 ODA2 0 FOFB ODA2 0 FOFB ODA3 0 4C18 ODA8 ODA5 0 4400 OF69 ODA7 0 3168	G844 ***** A846  G846 H846 ***** A848  G848 H848  H848	BSI DC BSI MDX ***** LDX MDX MDX BSI DC BSI C BS	L **** 3 3 L L **** L1 1 1 1 1 L L	F000 /3137 F005 A844 ************** -1 1 G846 H846 F000 /3138 F005 A846 *********** -1 4 G848 H849 F000 /3139 F005 A848 ********** 1 -2 H849 1 N845 1 N849 K849,&- F000 /3168	ERR ID  CK LOCK ON ERROR  LOOP  ********************************	3A152070 3A152080 3A152100 3A152120 3A152120 3A152120 3A152130 3A152140 3A152140 3A152180 3A152180 3A152180 3A152210 3A152210 3A152220 3A152220 3A152220 3A152220 3A152230 3A152230 3A152360 3A152360 3A152360 3A152360 3A152360

	•				T MUX UP	3A136300
ODA9 O FOIE		EOR		N841	ZERO ACC WITH /FFFF	3A152390
ODAA O 4C18 ODA			L			3A152400
ODAC 0 4400 OF6	9		L			3A152410
ODAE 0 313A		DC				3A152420
ODAF 0 4400 OFC	4 G849	BSI	L	F005	CK LOCK ON ERROR	3A152430
ODB1 0 70EA		MDX		A849	LOOP	3A152440
	*****	****	***	*********	*******	34152450
ODB2 0 7400 ODC			L		TEST SKIP IF ZERO	3A152460 '
	O MOTA				BYPASS IF CORRECT OP	3A152470
ODB4 0 7001		MDX		G84A	BIPASS IF CURRECT UP	
ODB5 0 7003		₩DX		H84A		3A152480
ODB6 0 4400 OF6	9 G84A	BSI	L	F000	MDX L FAILED TO SKIP	3A152490
ODB8 0 3171		DC		/3171	ERR ID	3A152500
ODB9 0 4400 OFC	4 H84A	BSI	L	F005	CK LOCK ON ERROR	3A152510
ODBB 0 70F6		MDX		A84A	LOOP	3A152520
0000 0 10.0	****		***		*******	
ODBC 0 7400 ODC			L	N844.0	TEST NON SKIP	3A152540
	C AOJA		_		TEST NON SKIT	3A152550
ODBE 0 7003	_	MDX		H85A		
ODBF 0 4400 OF6	9		L	F000	MDX L SKIPED	3A152560
ODC1 0 3172		DC		/3172	ERR ID	3A152570
ODC 2 0 4400 OFC	4 H85A	BSI	L	F005	CK LOCK ON ERROR	3A152580
ODC4 0 70F7		MDX		A85A	LOOP	3A152590
ODC5 0 7009		MDX		A880	EXIT TO NEXT ROUTINE	3A152600
ODC6 O 0000	N84A	-		0	CONSTANT ZERO	3A152610
5555 5 6666			**		*******	
					*****	
						3A152640
CORE DATA OF						
ADDR INSTRUC	CTION *BEL /	ATION	FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	3A152650
**********	*********	*****	**	*********	***********	
ODC7 0 0000	N840	DC		/0000	STORAGE	3A152670
ODC8 O FFFF	N841	DC		/FFFF		3A152660
ODC9 0 3000	N842	WAIT			ADD TO MEM FAILED	3A152690
ODCA 0 3000		MAIT			ADD TO MEM FAILED	3A152700
ODCB 0 3000	N843	WAIT			ADD TO MEM FAILED	3A152710
	N844	DC		/0001	ADD TO THE TAREED	3A152720
ODCC 0 0001					•	3A152730
ODCD O ODCC	N845	DC		N844		
ODCE 0 3001	N846	DC		/3001		3A152740
	*					3A152750
	•			1621	OF SLC OPERATION	3A152760
	*					3A152770
	****	*****	***	********	*********	3A152780
ODCF 0 610A	A880	LDX	1	10	LD XR 1 WITH &10	3A152790
ODDO O CCOO OE	r.R	LDD	L	N882	LD A#/0000 Q#/FFFF	3A152800
ODD2 0 2002		LDS	_	2	SET C ON	3A152810
ODD3 0 1140		SLCA	1		NOW A#/0000 Q#/FFFF	3A152820
					STORE CXXR 1m	3A152830
ODD4 0 6000 OE	L 1		LI	N880		3A152840
00D6 0 2812		STS		G881	STORE CARRY CONDITION	
0007 0 4C18 0D		BSC			BRANCH ON ZERO	3A152850
ODD9 0 4400 OF	69	BSI	L	F000	ACC NOT#ZERO	3A152860
ODDB 0 313B		DC		/313B	ERR ID	3A152870
ODDC 0 4400 OF	98 G880	BSI	L	FOOE	CK LOCK ON ERROR	3A152880
ODDE 0 70F0		MDX		A880	LOOP	3A152890
ODDF O C400 OE	C7	LD	L	N880	LD PREVIOUS CXXR 1m	3A152900
ODE1 0 4C18 OD		BSC		G882,&-	BRANCH ON ZERO	3A152910
ODE3 0 4400 OF		BSI		F000	XR 1 NOT#ZERO	3A152920
	07		L			3A152930
ODE5 0 313C		DC		/313C	ERR ID	3A152940
ODE6 0 4400 OF	98 G882	851	L	FOOE	CK LOCK ON ERROR	
ODE8 0 70E6		MDX		A880	LOOP	3A152950
ODE9 0 2000	G881	LDS		0	SAVED BY STS ABOVE	3A152960
ODEA 0 4802		BSC		С	SK IF CARRY OFF	3A152970
ODEB 0 7004		MDX		G883	CARRY ON	3A152980
ODEC 0 4400 OF	C4	BSI	L	F005	CK LOCK ON ERROR	3A152990
ODEE 0 70E0	-	MDX	-	A880	LOOP	3A153000
		MDX		A884	EXIT TO NEXT ROUTINE	3A153010
ODEF 0 7006	40 000					3A153020
ODFO 0 4400 OF	69 G883	851	L		CARRY ON SCHOULD NOT BED	
GDF2 0 3160		DC		/3160	ERR ID	3A153030
ODF3 0 4400 OF	C4	BSI	L	F005	CK_LOCK ON ERROR	3A153040
ODF5 0 70D9		MDX		A88A	LOOP	3A153050

* MDX OP

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DATE 02JAN66 01MAY66 15NOV66 15FEB68 26AUG68 EC NO. 415490 415490C 419643 420403 420403A PROG ID 03A1-1 PAGE 39A

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OPF 6   0.580   OFF 0   0.580   OFF 0   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.580   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.00					*****	****	***	*******	********	3A153060
OPF8 0   CC00   OPF6   LDD L   N884   LD	ODEA	0	6580	DECD				1.007	1 D ND 1 117711 15500	
Section   Sect					A004			NRR4	ID ##/0001 0#/0010	
OPFB 0 1140				020-			_	0	SET C AND DE DEE	
OPFC   0 2818			-				1			
OPPE   0 F400   0 F							•			
DOFF   0 4C18 0E04				OFCC				NOOA	7500 HITH /0000	
0E01 0 4400 0F69		_						G884.6-	BRANCH, ON 7FRO	
0E06 0 70EF									ACC NOT#/8000	
0E06 0 70EF							_		ERR ID	
Dec   0   70   70   70   70   70   70   70				0F98	G884	BSI	L	F00E	CHECK LOOP SWITCH	
DEOR   C400   DECT   LD   L   N880	0E06	0	70EF			MDX		A884		
COBD   0 F400   OED4   EOR   L   NBSE   ZERO NITH /FF01   3A153200	0E07	0	6000	OEC7		STX	Ll	N880	STORE CEXR 10 AT N880	3A153180
0E12 0 4400 0F98 G886 BS1 L FODE CK LOCK ON ERROR 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153220 0E17 0 7003 MDX G887 SS1 L FOOD CARRY OFF, SHOULD BE ON 3A153280 0E18 0 4400 0F69 BS1 L FOOD CARRY OFF, SHOULD BE ON 3A153200 0E18 0 3161 OC /3161 ERR ID 3A153300 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 5800 0EC8 MDX A884 LODP 3A153320  **********************************	0E09	0	C400	OEC7		LD	L	N880	LD CIN880m	3A153190
0E12 0 4400 0F98 G886 BS1 L FODE CK LOCK ON ERROR 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153220 0E17 0 7003 MDX G887 SS1 L FOOD CARRY OFF, SHOULD BE ON 3A153280 0E18 0 4400 0F69 BS1 L FOOD CARRY OFF, SHOULD BE ON 3A153200 0E18 0 3161 OC /3161 ERR ID 3A153300 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 5800 0EC8 MDX A884 LODP 3A153320  **********************************	0E0B	0	F400	OED4		E OR	L	N88E	ZERO WITH /FF01	3A153200
0E12 0 4400 0F98 G886 BS1 L FODE CK LOCK ON ERROR 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153220 0E17 0 7003 MDX G887 SS1 L FOOD CARRY OFF, SHOULD BE ON 3A153280 0E18 0 4400 0F69 BS1 L FOOD CARRY OFF, SHOULD BE ON 3A153200 0E18 0 3161 OC /3161 ERR ID 3A153300 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 5800 0EC8 MDX A884 LODP 3A153320  **********************************	OEOD	0	4C18	0E12		BSC	L	-3,688D	BRANCH ON ZERO	3A153210
0E12 0 4400 0F98 G886 BS1 L FODE CK LOCK ON ERROR 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153250 0E15 0 2000 G885 LDS 0 SAVED BY STS ABOVE 3A153220 0E17 0 7003 MDX G887 SS1 L FOOD CARRY OFF, SHOULD BE ON 3A153280 0E18 0 4400 0F69 BS1 L FOOD CARRY OFF, SHOULD BE ON 3A153200 0E18 0 3161 OC /3161 ERR ID 3A153300 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 4400 0F64 G887 BS1 L FOOD CK LOCK ON ERROR 3A153310 0E18 0 5800 0EC8 MDX A884 LODP 3A153320  **********************************	OECF	0	4400	0F69		BSI	L	F000	XR-1 NOT FF01	3A153220
0E14 0 70E1	0E11	0	313E			DC		/313E	ERR ID	3A153230
DELS 0 2000				0F98	G886		L			3A153240
DELE O 4600										
DEIT 0 7003					G885			-	SAVED BY STS ABOVE	3&153260
DELB   0 4400 0F69								_	SK IF CARRY OFF	
DELB   0   3400   0   0   0   0   0   0   0   0   0										
Note				0F69			L			
MDX		_					_			
######################################		-			G887		L			
CORE DATA OR #LA DPER- ADDR INSTRUCTION *BEL ATION FT OPERANDS & REMARKS ID&SEQ# AT RIGHT 3A153350  2A153350  2A153350  2A153360  2A1536	OFID	O	7008			-				
CORE   DATA OR										3A153330
ADDR INSTRUCTION *BEL ATION FT OPERANDS & REMARKS ID&SEQ# AT RIGHT 3A153360 ***********************************										
DELE D 6580 DECB				_				00504406	BEMARKS INCCCOUNT AT BIGUT	
DELE   0 6580   OECB   A888   LOX   11 N885   LD			1421	KUCIIUN	+DEL /	HIIUN	F:	UPERANUS &	KEMAKKS IUGSEUF AT KIGHT	3A15336U
0E20 0 CC00 0ECC										
DE22					A000	-				34153300
0E23         0 F400         0ECC         EOR         L N886         ZERO MITH /8000         3A153410           0E25         0 4618         0E2A         8SC         L G888, E-BRANCH ON ZERO         3A153420           0E27         0 4400         0F69         BSI         L F000         ACC NOT#8000         3A153430           0E29         0 313F         DC         /313F         ERR ID         3A153450           0E20         0 70F1         MDX         A888         L DOP         3A153450           0E20         0 6D00         OEC7         STX         L1 N880         STORE CXXR 1m IN N880         3A153460           0E2D         0 6D00         OEC7         STX         L1 N880         STORE CXXR 1m IN N880         3A153460           0E21         0 6D00         OEC7         STX         L1 N880         STORE CXXR 1m IN N880         3A153460           0E31         0 7400         OECB         EOR         L N885         ZERO MITH /0010         3A153490           0E33         0 4400         OF69         BSI         L F005         CK LOCK ON ERROR         3A153550           0E33         0 4400         OF64         G88A         BSI         L F005         CK LOCK ON ERROR         3A15355				OLCC						
0E2D 0 6D00 0EC7         STX L1 N880         STORE CXXR 1m IN N880         3A153470           0E2F 0 C400 0EC7         LD L N880         LD CXN880m         3A153480           0E31 0 F400 0ECB         EOR L N885         ZERO MITH /0010         3A153490           0E33 0 4C18 0E38         BSC L G88A, E- BRANCH ON ZERO         3A153500           0E35 0 4400 0F69         BSI L F000         XR 1 NOT#0010         3A153510           0E37 0 3140         DC /3140         ERR ID         3A153520           0E38 0 4400 0FC4         G88A BSI L F005         CK LOCK ON ERROR         3A153530           0E3A 0 70E3         MDX A888         LOOP         3A153540           ************************************				DECC			. ^	NARA	7580 MITH /8000	
0E2D 0 6D00 0EC7         STX L1 N880         STORE CXXR 1m IN N880         3A153470           0E2F 0 C400 0EC7         LD L N880         LD CXN880m         3A153480           0E31 0 F400 0ECB         EOR L N885         ZERO MITH /0010         3A153490           0E33 0 4C18 0E38         BSC L G88A, E- BRANCH ON ZERO         3A153500           0E35 0 4400 0F69         BSI L F000         XR 1 NOT#0010         3A153510           0E37 0 3140         DC /3140         ERR ID         3A153520           0E38 0 4400 0FC4         G88A BSI L F005         CK LOCK ON ERROR         3A153530           0E3A 0 70E3         MDX A888         LOOP         3A153540           ************************************							ī	G888. E-	BRANCH ON ZERO	34153420
0E2D 0 6D00 0EC7         STX L1 N880         STORE CXXR 1m IN N880         3A153470           0E2F 0 C400 0EC7         LD L N880         LD CXN880m         3A153480           0E31 0 F400 0ECB         EOR L N885         ZERO MITH /0010         3A153490           0E33 0 4C18 0E38         BSC L G88A, E- BRANCH ON ZERO         3A153500           0E35 0 4400 0F69         BSI L F000         XR 1 NOT#0010         3A153510           0E37 0 3140         DC /3140         ERR ID         3A153520           0E38 0 4400 0FC4         G88A BSI L F005         CK LOCK ON ERROR         3A153530           0E3A 0 70E3         MDX A888         LOOP         3A153540           ************************************							ī	F000	ACC NOT#8000	34153430
0E2D 0 6D00 0EC7         STX L1 N880         STORE CXXR 1m IN N880         3A153470           0E2F 0 C400 0EC7         LD L N880         LD CXN880m         3A153480           0E31 0 F400 0ECB         EOR L N885         ZERO MITH /0010         3A153490           0E33 0 4C18 0E38         BSC L G88A, E- BRANCH ON ZERO         3A153500           0E35 0 4400 0F69         BSI L F000         XR 1 NOT#0010         3A153510           0E37 0 3140         DC /3140         ERR ID         3A153520           0E38 0 4400 0FC4         G88A BSI L F005         CK LOCK ON ERROR         3A153530           0E3A 0 70E3         MDX A888         LOOP         3A153540           ************************************							_	/313F	ERR ID	
0E2D 0 6D00 0EC7         STX L1 N880         STORE CXXR 1m IN N880         3A153470           0E2F 0 C400 0EC7         LD L N880         LD CXN880m         3A153480           0E31 0 F400 0ECB         EOR L N885         ZERO MITH /0010         3A153490           0E33 0 4C18 0E38         BSC L G88A, E- BRANCH ON ZERO         3A153500           0E35 0 4400 0F69         BSI L F000         XR 1 NOT#0010         3A153510           0E37 0 3140         DC /3140         ERR ID         3A153520           0E38 0 4400 0FC4         G88A BSI L F005         CK LOCK ON ERROR         3A153530           0E3A 0 70E3         MDX A888         LOOP         3A153540           ************************************	0E2A	0	4400	0F98	G888	BSI	L	FOOE	CK LOCK ON ERROR	
0E2F 0 C400 0EC7 0EC8         LD L N880 LD C\$N880m         3A153480           0E31 0 F400 0EC8 EOR L N885 ZERO MITH /0010         3A153490           0E33 0 4C18 0E38 BSC L G88A, ε- BRANCH ON ZERO         3A153500           0E35 0 4400 0F69 BSI L F000 XR 1 N0T#0010         3A153510           0E37 0 3140 DC /3140 ERR ID         3A153520           0E38 0 4400 0F64 G88A BSI L F005 CK LOCK ON ERROR         3A153520           0E38 0 6110 A889 LDX 1 16 LD XR 1 MITH /0010 3A153550         3A153550           0E38 0 6110 A889 LDX 1 16 LD XR 2 MITH /0010 3A153550         3A153550           0E30 0 6310 LDX 3 16 LD XR 3 MITH /0010 3A153570         3A153550           0E30 0 6310 LDX 3 16 LD XR 3 MITH /0010 3A153570         3A153560           0E30 0 6400 0ECA LD L N884 LD A#/0001 3A153590         3A153500           0E40 0 1041 SLCA 1 ACC NOM /0002 3A153610         3A153600           0E43 0 4C18 0E48 BSC L G889, ε- BRANCH ON ZERO 3A153610         3A153600           0E45 0 4400 0F69 BSI L F005 CK LOCK ON ERROR 3A153630         3A153640           0E48 0 4400 0F64 G889 BSI L F005 CK LOCK ON ERROR 3A153630         3A153660           0E48 0 6110 A88A LDX 1 16 LD XR 1 MITH /0010 3A153600         3A153660           0E48 0 6110 A88A LDX 1 16 LD XR 1 MITH /0010 3A153600         3A153660           0E4B 0 6110 A88A LDX 1 16 LD XR 2 MITH /0010 3A153600         3A153660           0E4B 0 61	0E2C	0	70F 1			MDX		<b>888</b>	LOOP	3A153460
OE31 0 F400 0ECB	0E2D	0	6D00	OEC7		STX	Ll	N880	STORE CEXR 1º IN N880	3A153470
DE33 0 4C18 DE38 BSC L G88A, E- BRANCH ON ZERO 3A153500 DE35 0 4400 DFC4 BS1 L FOOD XR 1 NOT#ODIO 3A153510 DC 73140 ERR ID 3A153520 DE38 0 4400 DFC4 G88A BSI L FOO5 CK LOCK ON ERROR 3A153530 DE38 0 6110 A889 LDX 1 16 LD XR 1 MITH /ODIO 3A153560 DE3C 0 6210 LDX 2 16 LD XR 2 MITH /ODIO 3A153560 DE3C 0 6210 LDX 3 16 LD XR 3 MITH /ODIO 3A153580 DE3E 0 C400 DECA LD L N884 LD A#/OO01 3A153580 DE3E 0 C400 DECA LD L N884 LD A#/OO01 3A153600 DE41 0 F400 DED1 EDR L N88B ZERO MITH /OOO2 3A153600 DE43 0 4C18 DE48 BSC L G889, E- BRANCH ON ZERO 3A153620 DE45 0 4400 DFC4 BSI L FOOD NON INDEXED SLCA FAILED 3A153640 DE47 0 3162 DC /3162 ERR ID 3A153650 DE48 0 4400 DFC4 G889 BSI L FOO5 CK LOCK ON ERROR 3A153650 DE48 0 4400 OFC4 G889 BSI L FOO5 CK LOCK ON ERROR 3A153650 DE48 0 6110 A88A LDX 1 16 LD XR 1 MITH /ODIO 3A153660 DE48 0 6110 A88A LDX 1 16 LD XR 1 MITH /ODIO 3A153660 DE46 0 6210 LDX 2 16 LD XR 2 MITH /ODIO 3A153660 DE47 0 6310 LDX 3 16 LD XR 3 MITH /ODIO 3A153690 DE46 0 6210 LDX 2 16 LD XR 2 MITH /ODIO 3A153690 DE46 0 6310 LDX 3 16 LD XR 3 MITH /ODIO 3A153700 DE46 0 CC00 DEC8 LDD L N882 LD A#/OOOO Q#/FFFF 3A153710 DE50 0 10CF SLC 15 NOW A#/7FFF Q#/1000 3A153720						LD	L	N880		3A153480
DE33 0 4C18 DE38 BSC L G88A, E- BRANCH ON ZERO 3A153500 DE35 0 4400 DFC4 BS1 L FOOD XR 1 NOT#ODIO 3A153510 DC 73140 ERR ID 3A153520 DE38 0 4400 DFC4 G88A BSI L FOO5 CK LOCK ON ERROR 3A153530 DE38 0 6110 A889 LDX 1 16 LD XR 1 MITH /ODIO 3A153560 DE3C 0 6210 LDX 2 16 LD XR 2 MITH /ODIO 3A153560 DE3C 0 6210 LDX 3 16 LD XR 3 MITH /ODIO 3A153580 DE3E 0 C400 DECA LD L N884 LD A#/OO01 3A153580 DE3E 0 C400 DECA LD L N884 LD A#/OO01 3A153600 DE41 0 F400 DED1 EDR L N88B ZERO MITH /OOO2 3A153600 DE43 0 4C18 DE48 BSC L G889, E- BRANCH ON ZERO 3A153620 DE45 0 4400 DFC4 BSI L FOOD NON INDEXED SLCA FAILED 3A153640 DE47 0 3162 DC /3162 ERR ID 3A153650 DE48 0 4400 DFC4 G889 BSI L FOO5 CK LOCK ON ERROR 3A153650 DE48 0 4400 OFC4 G889 BSI L FOO5 CK LOCK ON ERROR 3A153650 DE48 0 6110 A88A LDX 1 16 LD XR 1 MITH /ODIO 3A153660 DE48 0 6110 A88A LDX 1 16 LD XR 1 MITH /ODIO 3A153660 DE46 0 6210 LDX 2 16 LD XR 2 MITH /ODIO 3A153660 DE47 0 6310 LDX 3 16 LD XR 3 MITH /ODIO 3A153690 DE46 0 6210 LDX 2 16 LD XR 2 MITH /ODIO 3A153690 DE46 0 6310 LDX 3 16 LD XR 3 MITH /ODIO 3A153700 DE46 0 CC00 DEC8 LDD L N882 LD A#/OOOO Q#/FFFF 3A153710 DE50 0 10CF SLC 15 NOW A#/7FFF Q#/1000 3A153720						EOR	L	N885	ZERO WITH /0010	3A153490
0E37 0 3140 0 FC4 0E38 0 4400 0FC4 0E38 0 4400 0FC4 0E38 0 4400 0FC4 0E38 0 510 0E38 0 6110 0 528 0 6210 0E38 0 6110 0 528 0 6240 0E38 0 6310 0E38 0 6310 0E38 0 6310 0E40 0E40 0FC4 0 6210 0E40 0FC4 0 6210 0E40 0FC4 0 6210 0E40 0FC4 0 6210 0E40 0FC4 0 6310 0FC4 0						BSC	L	G88A,&-	BRANCH ON ZERO	3A153500
0E37 0 3140 0 FC4 0E38 0 4400 0FC4 0E38 0 4400 0FC4 0E38 0 4400 0FC4 0E38 0 510 0E38 0 6110 0 528 0 6210 0E38 0 6110 0 528 0 6240 0E38 0 6310 0E38 0 6310 0E38 0 6310 0E40 0E40 0FC4 0 6210 0E40 0FC4 0 6210 0E40 0FC4 0 6210 0E40 0FC4 0 6210 0E40 0FC4 0 6310 0FC4 0				0F69		BSI	L	F000	XR 1 NOT#0010	3A153510
MDX						DC		/3140		
MDX				OFC4	G88A	BSI	L	F005	CK LOCK ON ERROR	
0E3B 0 6110         A889 LDX 1 16         LD XR 1 WITH /0010         3A153560           0E3C 0 6210         LDX 2 16         LD XR 2 WITH /0010         3A153570           0E3D 0 6310         LDX 3 16         LD XR 3 WITH /0010         3A153580           0E3E 0 C400 0ECA         LD L N884         LD A#/0001         3A153590           0E40 0 1041         SLCA 1         ACC NOW /0002         3A153610           0E41 0 F400 0ED1         EOR L N88B         ZERO WITH /0002         3A153610           0E43 0 4C18 0E48         BSC L G889, E- BRANCH ON ZERO         3A153620           0E45 0 4400 0F69         BSI L F000         NON INDEXED SLCA FAILED         3A153640           0E48 0 4400 0F64         G889 BSI L F005         CK LOCK ON ERROR         3A153660           0E48 0 400 0F64         G889 BSI L F005         CK LOCK ON ERROR         3A153660           0E48 0 6110         A88A LDX 1 16         LD XR 1 WITH /0010         3A153680           0E40 0 6210         LDX 2 16         LD XR 2 WITH /0010         3A153690           0E4E 0 CC00 0EC8         LDD L N882         LD A#/0000 Q#/FFFF         3A153710           0E50 0 10CF         SLC 15         NOW A#/7FFF Q#/1000         3A153720	0E3A	0	70E3						LOOP	3A153540
0E3C         0 6210         LDX         2 16         LD XR         2 WITH /0010         3A153570           0E3D         0 6310         LDX         3 16         LD XR         3 WITH /0010         3A153580           0E3E         0 C400         0ECA         LD         L N884         LD A#/0001         3A153580           0E40         0 1041         SLCA         1         ACC NOW /0002         3A153600           0E41         0 F400         0ED1         EOR         L N88B         ZERO WITH /0002         3A153610           0E43         0 4C18         0E48         BSC         L G889, E-BRANCH ON ZERO         3A153620           0E45         0 4400         0F69         BSI         L F000         NON INDEXED SLCA FAILED         3A153630           0E47         0 3162         DC         /3162         ERR ID         3A153640           0E48         0 4400         0FC4         G889         BSI         L F005         CK LOCK ON ERROR         3A153650           0E48         0 4400         0FC4         G889         BSI         L F005         CK LOCK ON ERROR         3A153660           0E4A         0 70F0         MDX         A889         LOD         XR         WITH /0010	0535	_								
0E3D 0 6310         LDX 3 16         LD XR 3 WITH /0010         3A153580           0E3E 0 C400 0ECA         LD L N884         LD A#/0001         3A153590           0E40 0 1041         SLCA 1         ACC NOW /0002         3A153600           0E41 0 F400 0ED1         EOR L N88B         ZERO WITH /0002         3A153610           0E43 0 4C18 0E48         BSC L G889, E-BRANCH ON ZERO         3A153620           0E45 0 4400 0F69         BSI L F000         NON INDEXED SLCA FAILED         3A153640           0E47 0 3162         DC /3162         ERR ID         3A153640           0E48 0 4400 0FC4         G889 BSI L F005         CK LOCK ON ERROR         3A153660           V************************************					A889					
0E3E 0 C400 0ECA         LD L N884         LD A#/0001         3A153590           0E40 0 1041         SLCA 1         ACC NOW /0002         3A153600           0E41 0 F400 0ED1         EDR L N88B         ZERO MITH /0002         3A153610           0E43 0 4C18 0E48         BSC L G889, E- BRANCH ON ZERO         3A153620           0E45 0 4400 0F69         BS1 L F000         NON INDEXED SLCA FAILED         3A153630           0E47 0 3162         DC /3162         ERR ID         3A153640           0E48 0 4400 0FC4         G889 BS1 L F005         CK LOCK DN ERROR         3A153650           0E4A 0 70F0         MDX A889         LOOP         3A153660           ************************************										
0E40         0 1041         SLCA         1         ACC NOW /0002         3A153600           0E41         0 F400         0ED1         EDR L N88B         ZERO MITH /0002         3A153610           0E43         0 4C18         0E48         BSC L G889, E- BRANCH ON ZERO         3A153620           0E45         0 4400         0F69         BSI L F000         NON INDEXED SLCA FAILED         3A153630           0E48         0 4400         0FC4         G889         BSI L F005         CK LOCK DN ERROR         3A153650           0E48         0 4400         OFC4         G889         BSI L F005         CK LOCK DN ERROR         3A153660           0E4A         0 70F0         MDX         A889         LOOP         3A153660           ************************************								-		
0E41 0 F400 0ED1         EOR L N88B         ZERO WITH /0002         3A153610           0E43 0 4C18 0E48         BSC L G889, E BRANCH ON ZERO         3A153620           0E45 0 4400 0F69         BSI L F000         NON INDEXED SLCA FAILED         3A153630           0E47 0 3162         DC /3162         ERR ID         3A153640           0E48 0 4400 0FC4         G889 BSI L F005         CK LOCK ON ERROR         3A153650           0E4A 0 70F0         MDX A889         LOOP         3A153660           0E48 0 6110         A88A LDX 1 16         LD XR 1 WITH /0010         3A153680           0E4C 0 6210         LDX 2 16         LD XR 2 WITH /0010         3A153690           0E4D 0 6310         LDX 3 16         LD XR 3 WITH /0010         3A153700           0E4E 0 CC00 0EC8         LDD L N882         LD A#/0000 Q#/FFFF         3A153710           0E50 0 10CF         SLC 15         NOW A#/7FFF Q#/1000         3A153720				DECA			L			
0E43         0 4C18         0E48         BSC         L         G889, E-         BRANCH ON ZERO         3A153620           0E45         0 4400         0F69         BS1         L         F000         NON INDEXED SLCA FAILED         3A153630           0E47         0 3162         DC         /3162         ERR ID         3A153640           0E48         0 4400         OFC4         G889         BS1         L         F005         CK LOCK ON ERROR         3A153650           0E4A         0 70F0         MDX         A889         LOOP         3A153660           ************************************				0501					* - · · · · · ·	
0E45 0 4400 0F69 0E47 0 3162         BSI L F000 NON INDEXED SLCA FAILED 3A153630 DC /3162 ERR ID 3A153640         3A153640 SA153640 DC /3162 ERR ID 3A153660 SA153650 DC /3162 ERR ID SLCA FAILED 3A153650 DC /3162 ERR ID SLCA FAILED 3A153650 DC /3162 ERR ID SLCA FAILED 3A153650 DC /3162 ERR ID SLCA FAILED 3A153660 DC /3162 ERR ID SLCA FAILE										
0E47 0 3162         DC /3162         ERR ID         3A153640           0E48 0 4400 0FC4 0FC4 0FC4 0FC4 0FC4 0FC4 0F										
0E48 0 4400 0FC4				UF 67			L			
0E4A 0 70F0         MDX         A889         LOOP         3A153660           0E4B 0 6110         A88A LDX 1 16         LD XR 1 WITH /0010         3A153680           0E4C 0 6210         LDX 2 16         LD XR 2 WITH /0010         3A153680           0E4D 0 6310         LDX 3 16         LD XR 3 WITH /0010         3A153690           0E4E 0 CC00 0EC8         LDD L N882         LD A#/0000         Q#/FFFF         3A153710           0E50 0 10CF         SLC 15         NOW A#/7FFF Q#/1000         3A153720				OEC4	CRRO					
######################################				VF64	0007		L			
0E4B 0 6110         A88A LDX 1 16         LD XR 1 WITH /0010         3A153680           0E4C 0 6210         LDX 2 16         LD XR 2 WITH /0010         3A153690           0E4D 0 6310         LDX 3 16         LD XR 3 WITH /0010         3A153700           0E4E 0 CC00 0EC8         LDD L N882         LD A#/0000 Q#/FFFF         3A153710           0E50 0 10CF         SLC 15         NOW A#/7FFF Q#/1000         3A153720	OL TA	•			****		***			
0E4C 0 6210       LDX 2 16       LD XR 2 WITH /0010       3A153690         0E4D 0 6310       LDX 3 16       LD XR 3 WITH /0010       3A153700         0E4E 0 CC00 0EC8       LDD L N882       LD A#/0000 Q#/FFFF       3A153710         0E50 0 10CF       SLC 15       NOW A#/7FFF Q#/1000       3A153720	OE4B	0	6110							
0E4D 0 6310										
0E4E 0 CC00 0EC8 LDD L N882 LD A#/0000 Q#/FFFF 3A153710 0E50 0 10CF SLC 15 NOW A#/7FFF Q#/1000 3A153720										
0E50 0 10CF SLC 15 NOW A#/7FFF Q#/1000 3A153720				OEC8						
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415490C 419643 420403 420403A

0E53	0	4618	OF F /						
0E.55					BSC	L	-3,888a	NON INDEXED SLC FAILED	3A153740
		3173			DC		/3173	ERR ID	3A153750
			OFC4	G88B	BSI	L		CK LOCK ON ERROR	3A153760
UESB	O	70F2			MDX		A88A	LOOP	3A153770
								************	3A153780
0F59	Λ	6580	OED2	ABBC	LDX				3A153790
		C872		-000	LDD	11		LD XR 1 WITH /0020 LD A#/0000 Q#/0000	3A153800
		1100			SLC	1		ACC NDW A#/0000 Q#/0000	3A153810 3A153820
0E5D	0	4C18	0E 62		BSC	L	_	BRANCH ON ZERO	3A153830
0E5F	0	4400	0F69		BSI	Ĺ		ACC NOT#0000	3A153840
		3141			DC		/3141	ERR ID	3A153850
			0F98	G88C	BSI	L	F00E	CK LOCK ON ERROR	3A153860
		70F4			MDX			LOOP	34153870
		1800			RTE		16	ACC NOW A#/0000 Q#/0000	3A153880
		4C18	0F69		BSC BSI	L		BRANCH ON ZERO	3A153890
		3142			DC B21	L	F000 /3142	Q REG NOT#0000 ERR ID	3A153900
			0F98	G88E		L		CK LOCK ON ERROR	3A153910 3A153920
		70EB			MDX	•	A88C	LOOP	3A153930
0E6E	0	6958			STX	1	N880		3A153940
		C057			LD		N880	LD C%N880=	3A153950
-	_		0E75		BSC	L		BRANCH ON ZERO	3A153960
	-		0F69		BSI	L		XR 1 NDT#000U	3A153970
		3143 4400			DC		/3143	ERR ID	3A153980
		70E1	Urt4	<b>J880</b>	BSI MDX	_			3A153990
00	·	.011		****			A88C	LOOP ******	3A154000
****	**	****	******	*****	****	***	********	************	34154010
CORE		DAT	A OR		OPER-				3A154030
ADDR		INS	TRUCTION	*BEL	ATION	FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	34154040
****	**:	*****	******	*****	****	***	********	*******************	3A154050
			0ED3	B882	LDX	11	N88D	LD XR 1 WITH /FFDF	3A154060
		C855			FDD		N88A	LD A#/0000 Q#/0002	3A154070
		FO4F			SLC EOR	1.	0	NOW A#/8000 Q#/0000	3A154080
02.0		1071						7500 UITU 10000	3435/000
0E7D	_	4C18	0F82				N886		
	0	4C18	0E82 0F69		BSC BSI	L L	J882,&-	BRANCH ON ZERO	3A154100
0E7F	0			-	BSC	-	J882,&-	BRANCH ON ZERO ACC NOT#/8000 ERR ID	3A154090 3A154100 3A154110 3A154120
0E7F 0E81 0E82	0 0 0	4400 3144 4400	0F69	J882	BSC BS1 DC	-	J882,&- F000 /3144	BRANCH ON ZERO ACC NOT#/8000 ERR ID	3A154100
0E7F 0E81 0E82 0E84	0 0 0 0	4400 3144 4400 70F3	0F69	J882	BSC BSI DC BSI MDX	L	J882,&- F000 /3144	BRANCH ON ZERO ACC NOT#/8000	3A154100 3A154110 3A154120
0E7F 0E81 0E82 0E84 0E85	0 0 0 0 0	4400 3144 4400 70F3 18D0	0F69 0F98	J882	BSC BSI DC BSI MDX RTE	L	J882.E- F000 /3144 F00E B882 16	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000	3A154100 3A154110 3A154120 3A154130 3A154140
0E7F 0E81 0E82 0E84 0E85 0E86	000000	4400 3144 4400 70F3 18D0 4C18	OF69 OF98 OE8B	J882	BSC BSI DC BSI MDX RTE BSC	L	J882.&- F000 /3144 F00E B882 16 J884.&-	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO	3A154100 3A154110 3A154120 3A154130 3A154140 3A154150 3A154160
0E7F 0E81 0E82 0E84 0E85 0E86 0E88	000000	4400 3144 4400 70F3 18D0 4C18 4400	OF69 OF98 OE8B	J882	BSC BSI DC BSI MDX RTE BSC BSI	L	J882.E- F000 /3144 F00E B882 16 J884.E- F000	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000	3A154100 3A154110 3A154120 3A154130 3A154140 3A154150 3A154160 3A154170
0E7F 0E81 0E82 0E84 0E85 0E86 0E88	00000000	4400 3144 4400 70F3 18D0 4C18 4400 3145	0F69 0F98 0E8B 0F69		BSC BSI DC BSI MDX RTE BSC BSI DC	Ĺ L L	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID	3A154100 3A154110 3A154120 3A154130 3A154140 3A154150 3A154160 3A154170 3A154180
0E7F 0E81 0E82 0E84 0E85 0E86 0E88 0E8A	000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400	0F69 0F98 0E8B 0F69	J882 J884	BSC BSI DC BSI MDX RTE BSC BSI DC	Ĺ L L	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR	3A154100 3A154110 3A154120 3A154130 3A154140 3A154160 3A154170 3A154180 3A154190
0E7F 0E81 0E82 0E84 0E85 0E86 0E88 0E8A 0E8B	0000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145	0F69 0F98 0E8B 0F69		BSC BSI DC BSI MDX RTE BSC BSI DC BSI	L L L	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP	3A154100 3A154110 3A154120 3A154130 3A154140 3A154160 3A154170 3A154180 3A154190 3A154200
0E7F 0E81 0E82 0E84 0E85 0E86 0E88 0E8A 0E8B 0E8B	000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037	OF69 OF98 OE8B OF69 OF98		BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX	L L L	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR	3A154100 3A154110 3A154120 3A154140 3A154150 3A154160 3A154170 3A154180 3A154190 3A154200 3A154210
0E7F 0E81 0E82 0E84 0E85 0E86 0E88 0E8A 0E8B 0E8D 0E8E 0E8F 0E90	000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037 F400	0F69 0F98 0E8B 0F69 0F98		BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX STX	L L L	J882. E- F000 /3144 F00E B882 16 J884. E- F000 /3145 F00E B882 N880	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE CXXR 1 AT N880	3A154100 3A154110 3A154120 3A154140 3A154140 3A154160 3A154170 3A154180 3A154200 3A154200 3A154210
0E7F 0E81 0E82 0E84 0E85 0E86 0E88 0E8B 0E8B 0E8F 0E90 0E92	0000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037 F400 4C18	0F69 0F98 0E8B 0F69 0F98		BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX STX LD EOR BSC		J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N886 J886, &-	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C%XR 1 AT N880 LD C%N880 ZERO WITH /FF01 BRANCH ON ZERO	3A154100 3A154110 3A154120 3A154140 3A154160 3A154170 3A154180 3A154190 3A154200 3A154200 3A154200 3A154230
0E7F 0E81 0E82 0E84 0E85 0E86 0E8B 0E8B 0E8F 0E8F 0E92 0E94	00000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037 F400 4C18 4400	0F69 0F98 0E8B 0F69 0F98		BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX STX LD EOR BSC BSI		J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N880 N886 J886. &- F000	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C%XR 1 AT N880 LD C%N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01	3A154100 3A154110 3A154130 3A154140 3A154150 3A154160 3A154170 3A154180 3A154190 3A154210 3A154220 3A154230 3A154230 3A154240 3A154240
0E7F 0E81 0E82 0E84 0E85 0E86 0E8B 0E8B 0E8F 0E90 0E92 0E94	0000000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037 F400 4C18 4400 3146	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69	J884	BSC BSI DC BSI MDX RTE BSC BSI DC BSI MDX STX LD EOR BSC BSC BSC BSC	L L L L L L L L L L L L L L L L L L L	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N880 N880 N886, &- F000 /3146	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C%XR 1 AT N880 LD C%N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID	3A154100 3A154110 3A154130 3A154140 3A154160 3A154170 3A154180 3A154190 3A154210 3A154210 3A154220 3A154220 3A154250 3A154250
0E7F 0E81 0E82 0E84 0E85 0E88 0E8B 0E8B 0E8F 0E92 0E92 0E92 0E94	0000000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037 F400 4C18 4400 3146 4400	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69		BSC BSI DC BSI MDX RTE BSC BSI DC BSI EOR BSC BSI EOR BSC BSI BSC BSI BSC BSI BSC BSI BSC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L L L L L L L L L L L L L L L L	J882. E- F000 /3144 F00E B882 16 J884. E- F000 /3145 F00E B882 N880 N880 N886, E- F000 /3146 F005	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C%XR 1 AT N880 LD C%N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR	3A154100 3A154110 3A154130 3A154140 3A154160 3A154170 3A154180 3A154200 3A154200 3A154220 3A154230 3A154240 3A154250 3A154250 3A154250 3A154250
0E7F 0E81 0E82 0E84 0E85 0E86 0E8B 0E8B 0E8F 0E90 0E92 0E94	0000000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 C037 F400 4C18 4400 3146 4400	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69	J884 J886	BSC BSI DC BSI MDX BSI DC BSI MDX LD EOR BSC BSI DC BSI MDX		J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N886 N886 N886 N886 N886 N886	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C\$XR 1 AT N880 LD C\$N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP	3A154100 3A154110 3A154120 3A154140 3A154150 3A154160 3A154170 3A154180 3A154210 3A154220 3A154220 3A154240 3A154240 3A154250 3A154260 3A154260 3A154270
0E7F 0E81 0E82 0E84 0E85 0E88 0E8B 0E8B 0E8F 0E92 0E92 0E92 0E94	00000000000000000	4400 3144 4400 70F3 18D8 4400 3145 4400 70EA 6938 C037 F400 4C18 4400 3146 4400 70DE	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69	J884 J886	BSC BSI DC BSI MDX BSI DC BSI MDX LD EOR BSC BSI DC BSI MDX		J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N886 N886 N886 N886 N886 N886	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C\$XR 1 AT N880 LD C\$N8800 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP	3A154100 3A154110 3A154120 3A154140 3A154150 3A154160 3A154170 3A154190 3A154200 3A154220 3A154220 3A154240 3A154250 3A154250 3A154260 3A154260 3A154270 3A154280 3A154280
0E7F 0E81 0E82 0E84 0E85 0E88 0E8B 0E8B 0E8F 0E92 0E94 0E96 0E99	000000000000000000000000000000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 CC18 4400 3146 4400 70DE C835	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69	J884 J886	BSC BSI DC BSI MDX BSI DC BSI MDX LD EOR BSI DC BSI MDX WDX	L L L L L L L L	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N886 N886 J886. &- F000 /3146 F005 B882	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C\$XR 1 AT N880 LD C\$N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP	3A154100 3A154110 3A154120 3A154140 3A154150 3A154160 3A154170 3A154190 3A154200 3A154220 3A154220 3A154240 3A154250 3A154250 3A154260 3A154260 3A154270 3A154280 3A154280
0E7F 0E81 0E82 0E84 0E86 0E88 0E88 0E88 0E89 0E99 0E99 0E97 0E99 0E98		4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70E 6938 C037 F400 4C18 4400 70DE C835 611F 11C0	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69	J884 J886	BSC BSI DC BSI MTE BSC BSI DC BSI STX LD EORC BSI DC BSI LD LD BSI MDX STX LD LD LD LD LD SSI MDX STX LD LD LD LD LD LD LD LD LD LD LD LD LD	L L L L L L L L L L L L L L L L L L L	J882. E- F000 /3144 F00E B882 16 J884. E- F000 /3145 F00E B882 N880 N880 N880 N886, E- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOM A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C%XR 1 AT N880 LD C%N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP	3A154100 3A154120 3A154120 3A154140 3A154150 3A154160 3A154180 3A154200 3A154220 3A154220 3A154220 3A154240 3A154240 3A154240 3A154240 3A154240 3A154240 3A154230
0E7F 0E81 0E82 0E84 0E85 0E86 0E88 0E8B 0E89 0E99 0E99 0E99 0E99 0E99 0E99D	000000000000000000000000000000000000000	4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70E8 6938 C037 F400 4C18 4400 3146 4400 70DE C835 611C0 4802	0F69 0F98 0E8B 0F69 0F98 0ED4 0E97 0F69	J884 J886	BSC BSI DC BSI MDX BSI DC BSI MDX STX LD BSI BSI DC BSI LDD LDX SSI DC BSI MDX STX LD BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	L L L L L L L L L L L L L L L L L L L	J882. E- F000 /3144 F00E B882 16 J884. E- F000 /3145 F00E B882 N880 N880 N886. E- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C\$XX 1  AT N880 LD C\$N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP LO C\$ N880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 LO A#/000 Q#/0002 LD XR 1 WITH /001F NOW A#/8000 Q#/0000 SK IF CARRY OFF	3A154100 3A154110 3A154140 3A154140 3A154160 3A154170 3A154180 3A154200 3A154200 3A154220 3A154220 3A154220 3A154230 3A154240 3A154250 3A154260 3A154260 3A154270 3A154280 3A154320 3A154310 3A154320
0E7F 0E81 0E82 0E84 0E85 0E88 0E88 0E8B 0E89 0E99 0E99 0E99 0E99 0E98 0E99 0E98	000000000000000000000000000000000000000	4400 3144 4400 70F3 145 4400 3145 4400 70EA 6938 C037 F400 4C18 4400 3146 4400 70DE C835 611F 11C0 4802 7003	OF69 OF98 OE8B OF69 OF98 OED4 OE97 OF69 OFC4	J884 J886	BSC BSI DC BSI MDX BSI BSI DC BSI BSI EOR BSI DC BSI LDD LDX LDD LDX BSC LDD BSI MDX MDX MDX MDX MDX MDX MDX MDX MDX MDX	i	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N88E J886. &- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE CXXR 1 AT N880 LD CXN880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP LOCK ON ERROR LOOP LOOP LOOP LOOP LOOP LOOP LOOP	3A154100 3A154110 3A154120 3A154140 3A154160 3A154170 3A154180 3A154200 3A154220 3A154220 3A154220 3A154220 3A154220 3A154240 3A154240 3A154260 3A154270 3A154280 3A154280 3A154300 3A154300 3A154300 3A154340
0E7F 0E81 0E82 0E84 0E88 0E88 0E88 0E88 0E99 0E99 0E99 0E99	000000000000000000000000000000000000000	4400 3144 4400 70F3 1808 4400 3145 4400 70EA 6938 6037 F400 4C18 4400 3146 4400 70DE C835 611F 11C0 7003 4400	OF69 OF98 OE8B OF69 OF98 OED4 OE97 OF69 OFC4	J884 J886	BSC BSI DC BSI RTE BSI DC BSI MDX STX LD EOR BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI DC BSI BSI DC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	i	J882, &- F000 /3144 F00E B882 16 J884, &- F000 /3145 F00E B882 N880 N880 N880 N880 N880 N880 N888 J886, &- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE CXXR 1  AT N880 LD CXN880  ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP LOOP LOOP LOOP LOOP LOOP LOOP	3A154100 3A154110 3A154120 3A154140 3A154150 3A154160 3A154170 3A154200 3A154210 3A154220 3A154220 3A154240 3A154240 3A154240 3A154240 3A154240 3A154240 3A154230 3A154240 3A154230 3A154230 3A154230 3A154330 3A154330 3A154330 3A154330
0E7F 0E81 0E82 0E84 0E88 0E88 0E88 0E88 0E89 0E99 0E99 0E99		4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70EA 6938 CC18 4400 3146 4400 70DE C835 611F 11C0 4802 7003 4400 3147	OF69 OF98 OE8B OF69 OF98 OED4 OE97 OF69 OFC4	J884 J886 ******	BSC BSI DC BSI RTE BSI DC BSI STX LD ESC BSI ESC BSI LDX CBSI LDX CBSI LDX CBSI BSI BSI BSI BSI BSI BSI BSI BSI BSI	i	J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N880 N880 N880 N888 J886. &- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE CXXR 1 AT N880 LD CXN880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP **********************************	3A154100 3A154120 3A154120 3A154140 3A154150 3A154160 3A154180 3A154200 3A154200 3A154220 3A154220 3A154240 3A154240 3A154240 3A154240 3A154280 3A154280 3A154300 3A154300 3A154300 3A154300 3A154300
0E7F 0E81 0E82 0E84 0E88 0E88 0E88 0E88 0E89 0E99 0E99 0E99		4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70E C837 F400 4C18 4400 70DE C835 611F 11C0 4802 7003 4400 3147 4400	OF69 OF98 OE8B OF69 OF98 OED4 OE97 OF69 OFC4	J884 J886	BSC BSI DC BSI RTE BSI DC BSI STX LD BSI BSI BSI BSI LDX BSI SLC BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		J882. E- F000 /3144 F00E B882 16 J884. E- F000 /3145 F00E B882 N880 N880 N880 N880 N886. E- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C*XX 1  AT N880 LD C**XN880 ZERO WITH /FF01 BRANCH ON ZERO XX-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP **********************************	3A154100 3A154110 3A154130 3A154140 3A154160 3A154160 3A154170 3A154180 3A154200 3A154200 3A154200 3A154220 3A154230 3A154240 3A154250 3A154260 3A154260 3A154360 3A154300 3A154300 3A154300 3A154300 3A154300 3A154300 3A154300 3A154370
0E7F 0E81 0E82 0E84 0E88 0E88 0E88 0E88 0E89 0E99 0E99 0E99		4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70E8 6938 C037 F400 4C18 4400 70DE C835 11C0 4802 7003 4400 70F5	OF69 OF98 OE8B OF69 OF98 OED4 OE97 OF69 OFC4	J884 J886 ******	BSC BSI DC BSI MTE BSI DC BSI STX LD BSI BSI BSI BSI LDX BSI LDX BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N880 N886 N880 N888 J886, &- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE CXXR 1 AT N880 LD CXN880 ZERO WITH /FF01 BRANCH ON ZERO XR-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP **********************************	3A154100 3A154110 3A154140 3A154140 3A154160 3A154160 3A154170 3A154200 3A154200 3A154220 3A154220 3A154230 3A154240 3A154240 3A154250 3A154260 3A154270 3A154280 3A15430 3A15430 3A15430 3A15430 3A154340 3A154340 3A154360 3A154370 3A154380
0E7F 0E81 0E82 0E84 0E88 0E88 0E88 0E88 0E89 0E99 0E99 0E99		4400 3144 4400 70F3 18D0 4C18 4400 3145 4400 70E8 6938 C037 F400 4C18 4400 70DE C835 11C0 4802 7003 4400 70F5	OF69 OF98 OEBB OF69 OF98 OED4 OE97 OF69 OFC4	J884 J886 ******	BSC BSI DC BSI MDX BSI DC BSI STX LD BSI BSI BSI LDX BSI LDX BSI LDX BSI BSI BSI BSI BSI BSI BSI BSI BSI BSI		J882. &- F000 /3144 F00E B882 16 J884. &- F000 /3145 F00E B882 N880 N880 N880 N886 N888  N888 J886. &- F000 /3146 F005 B882 **********************************	BRANCH ON ZERO ACC NOT#/8000 ERR ID CK LOCK ON ERROR LOOP NOW A#/0000 Q#/8000 BRANCH ON ZERO Q REG NOT#0000 ERR ID CK LOCK ON ERROR LOOP STORE C*XX 1  AT N880 LD C**XN880 ZERO WITH /FF01 BRANCH ON ZERO XX-1 NOT FF01 ERR ID CK LOCK ON ERROR LOOP **********************************	3A154100 3A154110 3A154140 3A154150 3A154160 3A154160 3A154170 3A154180 3A154200 3A154200 3A154200 3A154230 3A154240 3A154240 3A154240 3A154250 3A154260 3A154270 3A15430 3A15430 3A15430 3A15430 3A15430 3A15430 3A154370

02JAN66 01MAY66 15NOV66 15FEB68 26AUG68

415490 415490C 419643 420403 420403A

OEAA O 3148						
0EMM 0 3140		DC		/3148	ERR ID	3A154420
OEAB O 4400 OF98	J888	BSI	L	FOOE	CK LOCK ON ERROR	3A154430
0EAD 0 70EC		MDX		B884	LOOP	3A154440
OEAE O 6DOO OEC7		STX	L1	N880	STORE XR 1 WITH C#N8800	3A154450
0EBO 0 CO16		LD		N880	LD C%N880=	3A154460
0EB1 0 F018		EOR		N884	ZERO WITH /0001	3A154470
OEB2 O 4C18 OEB7		BSC	L	J889,&-	BRANCH ON ZERO	3A154480
0EB4 0 4400 0F69		BSI	L	F000	XR 1 NOT EQUAL 0001	3A154490
0EB6 0 3149		DC		/3149	ERR ID	3A154500
0EB7 0 4400 OFC4	J889	BSI	L	F005	CK LOCK ON ERROR	3A154510
OEB9 O 70EO		MDX		8884	LOOP	3A154520
	****	****	***	*******	*******	3A154530
OEBA O 611C	B885	LDX	1	28	LD XR 1 WITH /OOIC	3A154540
0EBB 0 C814		LDD		N88A	LD A#/0000 Q#/0002	3A154550
OEBC 0 1100		SLA	1	0	NOW A#/2000 Q#/0000	3A154560
0EBD 0 4802		BSC		C	SKIP IF CARRY OFF	3A154570
0EBE 0 7001		MDX		J88A		3A154580
0EBF 0 7003		MDX		J88B		3A154590
OECO O 4400 OF69	<b>J88A</b>	BSI	L	F000	CARRY IS ON	3A154600
OEC2 0 314A		DC		/314A	ERR ID	3A154610
OEC3 0 4400 OFC4	J88B	BSI	L	F005	CK LOCK ON ERROR	3A154620
0EC5 0 70F4		MDX		B885	LOOP	3A154630
0EC6 0 700F		MDX		B8A0	EXIT TO NEXT ROUTINE	3A154640
0EC7 0 0000	N880	DC		/0000	STORAGE	3A154650
0EC8 0000		BSS	E			3A15466C
OEC8 0 0000	N882	DC		/0000		3A154670
OEC9 O FFFF		DC		/FFFF		3A1 54680
OECA 0 0001	N884	DC		/0001		3A154690
OECB 0 0010	N885	DC		/0010		3A154700
OECC 0 8000	N886	DC		/8000		3A154710
OECD O FFDO	N887	DC		/FFDO		3A154720
OECE O 0000	N888	DC		/0000		3A154730
OECF 0 0000	i	DC		/0000		3A154740
0EDO 0 0000	N88A	DC		/0000		3A154750
0ED1 0 0002	N888	DC		/0002		3A154760
	N88C	DC		/0020		3A154770
	N88C N88D	DC DC		/0020 /FFDF		3A154770 3A154780
OED2 0 0020						
0ED2 0 0020 0ED3 0 FFDF	N88D	DC		/FFDF		3A154780
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F	DC DC DC	***	/FFDF /FF01 /7FFF	******	3A154780 3A154790
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F *****	DC DC DC		/FFDF /FF01 /7FFF	***********	3A154780 3A154790 3A154800
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F *****	DC DC DC		/FFDF /FF01 /7FFF		3A154780 3A154790 3A154800 3A154810
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ****	DC DC DC		/FFDF /FFD1 /7FFF *********************************		3A154780 3A154790 3A154800 3A154810 3A154820
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F *****	DC DC DC		/FFDF /FFD1 /7FFF *********************************	**********	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F *****	DC DC DC *****	***	/FFDF /FFD1 /7FFF *********************************	**************************************	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** *	DC DC DC	***	/FFDF /FF01 /7FFF *********************************	COMPARE INSTRUCTION	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * *	DC DC DC	***	/FFDF /FFO1 /7FFF *********************************	COMPARE INSTRUCTION  EXTENTION	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * *	DC DC DC *****	****	/FFDF /FFO1 /7FFF *********************************	COMPARE INSTRUCTION  EXTENTION COMPARED	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860 3A154870
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF *********************************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860 3A154860 3A154870 3A154890 3A154890
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF **********  TEST ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860 3A154860 3A154880 3A154880
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF **********  TEST ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860 3A154860 3A154870 3A154890 3A154890
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154860 3A154860 3A154860 3A154860 3A154890 3A154910
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * *	DC DC DC *****	****	/FFDF /FFO1 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860 3A154870 3A154880 3A154900 3A154900 3A154910 3A154920
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * * *	DC DC DC *****	****	/FFDF /FFO1 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154860 3A154870 3A154880 3A154890 3A154910 3A154910 3A154930
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * * * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF **********  TEST ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154860 3A154860 3A154860 3A154880 3A154890 3A154900 3A154900 3A154910 3A154920 3A154940
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * * * * * * * * * * * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154850 3A154860 3A154860 3A154880 3A154880 3A154900 3A154910 3A154920 3A154930 3A154940 3A154950 3A154940 3A154950 3A154970
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01	N88D N88E N88F ***** * * * * * * * * * * * * * * *	DC DC DC *****	****	/FFDF /FF01 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154850 3A154860 3A154860 3A154870 3A154890 3A154990 3A154910 3A154920 3A154920 3A154930 3A154930 3A154940 3A154950 3A154960
OED2 0 0020 OED3 0 FFDF OED4 0 FFO1 OED5 0 7FFF	N88D N88E ***** * * * * * * * * * * * * * * * *	DC DC DC *****	**** * # 4 # 4 £1	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO  INDEX REGI AND CORE S	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.	3A154780 3A154790 3A154800 3A154810 3A154830 3A154840 3A154850 3A154860 3A154860 3A154860 3A154880 3A154890 3A154990 3A154990 3A154930 3A154940 3A154950 3A154960 3A154970 3A154990 3A154990
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF	N88D N88E ***** * * * * * * * * * * * * * * * *	DC DC DC *****	**** * # 4 # 4 £1	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO  INDEX REGI AND CORE S	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800	3A154780 3A154790 3A154800 3A154810 3A154830 3A154840 3A154850 3A154860 3A154860 3A154860 3A154880 3A154890 3A154990 3A154920 3A154930 3A154940 3A154950 3A154960 3A154970 3A154990 3A154990 3A154990 3A154990 3A154990
OED2 0 0020 OED3 0 FFDF OED4 0 FF01 OED5 0 7FFF	N88D N88E N88F ****** * * * * * * * * * * * * * * *	DC DC DC *****	**** 1	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.	3A154780 3A154790 3A154800 3A154810 3A154830 3A154830 3A154850 3A154860 3A154860 3A154860 3A154880 3A154880 3A154980 3A154910 3A154910 3A154940 3A154940 3A154940 3A154940 3A154940 3A154960 3A154960 3A154980 3A155000 3A155010
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF  *********************************	N88D N88E N8**** * * * * * * * * * * * * * * * * *	DC DC DC ******	**** 1 # : 1 # : 4 # : 161 :	/FFDF /FFO1 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR ACCUMULATOR BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S  ************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154850 3A154860 3A154860 3A154860 3A154880 3A154890 3A154910 3A154910 3A154920 3A154930 3A154940 3A154950 3A154950 3A154960 3A154970 3A154980 3A155010 3A155010 3A155020
OED2 0 0020 OED3 0 FFDF OED4 0 FFO1 OED5 0 7FFF  CORE DATA OR ADDR INSTRUCTION	N88D N88E N88F***** * * * * * * * * * * * * * * * * *	DC DC DC ******	**** 1 # : 1 # : 4 # : 161 :	/FFDF /FFO1 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S ************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.	3A154780 3A154790 3A154800 3A154810 3A154820 3A154830 3A154840 3A154850 3A154860 3A154870 3A154880 3A154890 3A154990 3A154920 3A154940 3A154940 3A154970 3A154970 3A154970 3A154970 3A154990 3A155020 3A155020 3A155020
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF	N88D N88E N8**** * * * * * * * * * * * * * * * * *	DC DC DC DC ******	**** 1 # . 2 # . 4 # . 4 K1 . ****	/FFDF /FFO1 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 M BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S  ***********************************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.  ***********************************	3A154780 3A154790 3A154810 3A154810 3A154830 3A154830 3A154840 3A154850 3A154860 3A154860 3A154880 3A154980 3A154920 3A154910 3A154920 3A154940 3A154940 3A154960 3A154960 3A154960 3A154960 3A154960 3A154960 3A155000 3A155010 3A155010 3A155020 3A155030 3A155040
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF	N88D N88E N88F***** * * * * * * * * * * * * * * * * *	DC DC DC DC ***************************	*****  4 # # # # # # # # # # # # # # # # # #	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO  INDEX REGI AND CORE S  ***********************************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.  ***********************************	3A154780 3A154790 3A154810 3A154810 3A154830 3A154840 3A154850 3A154860 3A154860 3A154860 3A154880 3A154890 3A154990 3A154920 3A154930 3A154940 3A154940 3A154960 3A154970 3A154970 3A154970 3A155030 3A155030 3A155040 3A155040 3A155050
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF  CORE DATA OR ADDR INSTRUCTION 0ED6 0 1810 0ED7 0 D400 0001 0ED9 0 61FF	N88D N88E N88F***** * * * * * * * * * * * * * * * * *	DC DC DC ******************************	**** 4  #	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO  INDEX REGI AND CORE S  *************  OPERANDS & ************** 16 /0001 -1	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE N.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.  ***********************************	3A154780 3A154790 3A154800 3A154810 3A154830 3A154830 3A154850 3A154860 3A154860 3A154860 3A154880 3A154880 3A154890 3A154910 3A154920 3A154940 3A154940 3A154940 3A154960 3A154960 3A154960 3A155060 3A155020 3A155020 3A155040 3A155040 3A155060
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF  CORE DATA OR ADDR INSTRUCTION ************************************	N88D N88E N88F***** * * * * * * * * * * * * * * * * *	DC DC DC ******************************	**** 4	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR ACCUMULATOR BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S  ***********************************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.  ***********************************	3A154780 3A154790 3A154800 3A154810 3A154830 3A154830 3A154850 3A154860 3A154860 3A154870 3A154880 3A154890 3A154910 3A154910 3A154920 3A154940 3A154940 3A154960 3A154970 3A154960 3A155960 3A155000 3A155000 3A155000 3A155040 3A155040 3A155040 3A155040 3A155060 3A155060 3A155070
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF  CORE DATA OR ADDR INSTRUCTION ************************************	N88D N88E N88F***** * * * * * * * * * * * * * * * * *	DC DC DC DC ***************************	**** 4	/FFDF /FFO1 /7FFF **********  TEST  ACCUMULATOR ACCUMULATOR ACCUMULATOR WORD BEING # 2ND WORD  THE 1800 H BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S ************  OPERANDS & ************* 16 /0001 -1 /0001 W8C0+Z	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.  ***********************************	3A154780 3A154790 3A154800 3A154810 3A154830 3A154830 3A154850 3A154860 3A154860 3A154870 3A154890 3A154910 3A154910 3A154920 3A154930 3A154930 3A154960 3A154960 3A154970 3A154960 3A155050 3A155060 3A155010 3A155010 3A155040 3A155060 3A155060 3A155060 3A155060 3A155070 3A155080
0ED2 0 0020 0ED3 0 FFDF 0ED4 0 FF01 0ED5 0 7FFF  CORE DATA OR ADDR INSTRUCTION ************************************	N88D N88E N88F***** * * * * * * * * * * * * * * * * *	DC DC DC ******************************	**** 4	/FFDF /FF01 /7FFF ***********  TEST  ACCUMULATOR ACCUMULATOR ACCUMULATOR BUT THE 11 DETERMINES TESTED BEF INSTRUCTIO INDEX REGI AND CORE S  ***********************************	COMPARE INSTRUCTION  EXTENTION COMPARED ON DCM  AS A COMPARE INSTRUCTION 30 DOES NOT. THIS ROUTINE WHICH MACHINE IS BEING ORE ATTEMPTING A COMPARE IN.  STERS ARE HARDWARE IN 1800 TORAGE LOCATIONS IN 1130.  ***********************************	3A154780 3A154790 3A154800 3A154810 3A154830 3A154830 3A154850 3A154860 3A154860 3A154870 3A154880 3A154890 3A154910 3A154910 3A154920 3A154940 3A154940 3A154960 3A154970 3A154960 3A155960 3A155000 3A155000 3A155000 3A155040 3A155040 3A155040 3A155040 3A155060 3A155060 3A155070

DEDF					CMP		NBAO	A GREATER THAN M	3A15510
DEED					MDX		J8A0	A CREATER THAN M	3A15511
DEE1	-		0540		SLA		0 F000	A LESS THAN M	3A15512
OEE4		4400 3148	0169		BS I DC	L	/314B	A GREATER THAN M FAILED ERR ID	3A15513
		4400	0F98	JBAO	BSI	L	FOOE	CK LUCK ON ERROR	3A15515
OEE7	-				MDX	_	BBAO	LOOP	3A15516
0EE8	_				EOR		N8A2	ZERO WITH /4000	3A15517
		4C18			BSC	L	B8A1,&-	BRANCH ON ZERO	3A15518
	-	4400	0F69		BSI	L	F000	ACC CHANGED ERROR	3A15519
OEED		4400	0504		DC BSI	L	/314C F005	ERR ID	3A15520
0EF0	-		UPC-		WDX	L	B8A0	CK LOCK ON ERROR	3A15521 3A15522
<b>J</b> E. <b>J</b>	•	.00		*****	_	***		*******	3A15523
OEF1	0	C063		B8A1	LD		NBAO	N8A0 #/0000	3A15524
OEF2	_				CMP		N8A1	N8A1 #/1000	3A15525
OEF3					MDX		J8A2	A LESS THAN M FAILED	3A15526
OEF4			05.40		MDX		J8A1	A LESS THAN M	3A15527
OEF7		4400	UF69	J8A2	BSI DC	L	F000 /314D	A LESS THAN M FAILED ERR ID	3A15528 3A15529
		4400	OFC4	J8A1	BSI	L	F005	CK LOCK ON ERROR	3A15530
OEFA					MDX	-	B8A1	LOOP	3A15531
				****	****	***		*******	3A15532
OEFB	0	C059		BBA2	LD		NSAO	NBAC #/0000	3A15533
0EFC					CMP		NBA3	N8A3 #/2000	3A15534
OEFD OEFE					MDX		J8A4	A LESS THAN M FAILED A LESS THAN M	3A15535
		4400	0649	JBA4	MDX BSI	L	J8A3 F000	A LESS THAN M FAILED	3A15536 3A15537
0F01			0.07	JUAT	DC.	_	/314E	ERR ID	3A15538
		4400	OFC4	J8A3	BSI	L	F005	CK LOCK ON ERROR	3A15539
0F04	0	70F6			MDX		BBA2	LOOP	3A15540
						***		*******	3A15541
0F05	_			BBA3	LD		NBAO	N8A0 #/0000	3A15542
0F06 0F07					CMP MDX		N8A2 J8A6	NBA2 #/4000 A LESS THAN M FAILED	3A15543 3A15544
0F08					MDX		J8A5	A LESS THAN M	3A15545
		4400	0F69	J8A6	BSI	L		A LESS THAN M FAILED	3A15546
OF OB	0	314F			DC		/314F	ERR 1D	3A15547
		4400	OFC4	J845	BSI	L	F005	CK LOCK ON ERROR	3A15548
OFOE	0	70F6		****	MDX	***	B8A3	LOOP	3A15549 3A15550
OFOF	n	C044		BBA4	LD		N8C5	LD /8000	3A15551
0F10					CMP		NBAO	COMPARE CENSAGE /0000	3A15552
0F11					MDX		JBAB	A LESS THAN M FAILED	3A15553
0F12					MDX		J8A7	A LESS THAN M	3A15554
	_	4400	0F69	JBAB	BSI	L	F000	A LESS THAN M FAILED	3A15555
0F15		4400	0504	J8A7	DC BSI	L	/3150 F005	ERR ID CK LOCK ON ERROR	3A15556 3A15557
0F18			UFC4	JOAI	WDX	L	BBA4	LOOP	3A15558
0. 10	٠			****		***		******	3A15559
0F19	0	C036		B8A5	LD		N8A1	LD /1000	3A15560
OFIA	-				CMP		NBA1	CMP /1000	3A15561
OF1B					MDX		JAAA	A EQUAL M FAILED	3A15562
OF1C					MDX		JBAA	A EQUAL M FAILED	3A15563
		7003	0F69	JBAA	X CM		J8A9 F000	A#M A#M FAILED	3A15564 3A15565
0F20			J. U.		DC	•	/3151	ERR ID	3A15566
			OFC4	J8A9		L	F005	CK LOCK ON ERROR	3A15567
		70F5	-		MDX		B8A5	LOOP	3A15568
					****	***	********	*************	3A15569
				*			****	DOUBLE COMPARE	3A15570
				*			1621	DOUBLE COMPARE	3A15571 3A15572
****	k pt s	****	******		****	***	*******	*********	
CORE		DAT	A OR	*LA-	OPER-				3A15574
		INS	TRUCTION	*BEL	ATION	FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	
ADDR									
****	**			***** B8C0				LD A#/8000 Q#/0001	3A15577

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CPU

FUNCTION TEST		CP

0F25 0 B	82E		DCM		N8C 5	AQ GREATER THAN M, M&1	3A155780
0F26 0 7			MDX		J8C0		3A155790
0F27 0 1	000		SLA		0	NO-OP	3A155800
OF28 0 40	040		BSI		F000	FAILED A,Q NOT GREATER	3A155810
OF29 0 3			DC		/3152	ERR ID	3A155820
0F2A 0 4		<b>J8C0</b>	BSI	L	FOOE	CK LOCK ON ERROR	3A155830
0F2C 0 7			MDX		B8C0	LOOP	3A155840
0F2D 0 F			EOR		N8C6 ,	ZERO WITH /8000	3A155850
0F2E 0 44			BSC	L	J8C1,&-	BRANCH ON ZERO	3A155860
0F30 0 40			BSI		F000	ACC CHANGED	3A155870
0F31 0 3		1001	DC		/3153	ERR ID	3A155880
0F32 0 44		JBC 1	BSI	L	FOOE	CK LOCK ON ERROR	3A155890
0F34 0 70			MDX RTE		B8C0	LOOP NOW A#/0001 Q#/0000	3A155900
0F36 0 F			EOR		16 N8C6&1		3A155910 3A155920
0F37 0 46			BSC	L	J8C2.E-	BRANCH ON ZERO	3A155930
0F39 0 40			BSI	-	F000	Q REG CHANGED	3A155940
0F3A 0 3			DC		/3154	ERR ID	3A155950
0F3B 0 44		J8C2	BSI	L	F005	CK LOCK ON ERROR	3A155960
0F3D 0 70			MDX	-	B8CO	LOOP	3A155970
		*****		***		********	3A155980
0F3E 0 C	819	B8C1	LDD		N8C7	LD A#/0000 Q#/8000	3A155990
0F3F 0 B			DCM		NBC 8	A,Q LESS THAN M, ME1	3A156000
0F40 0 70	001		MDX		J8C3	A,Q GREATER THAN M,ME1	3A156010
OF41 0 70	002		MDX		J8C4	A,Q LESS THAN M,M&1	3A156020
0F42 0 40	026	J8C3	BSI		F000	FAILED A,Q GREATER	3A156030
0F43 0 3	155		DC		/3155	ERR ID	3A156040
OF44 0 40		J8C4	BSI		F005	CK LOCK ON ERROR	3A156050
OF45 0 70	0F8		MDX		B8C1	LOOP	3A156060
		*****	*****	***	******	******	3A156070
0F46 0 CI		B8C2	LDD		N8C 7	LD A#/0000 Q#/8000	3 <b>A156080</b>
0F47 0 B			DCM		N8C7	A,Q EQUQL M,M&1	3A156090
0F48 0 70			MDX		J8C5	A-Q GREATER	3A156100
0F49 0 70			MDX .		JBC5	A,Q LESS	3A156110
0F4A 0 70		1005	MDX		J8C6	A,Q # M,ME1	3A156120
OF4B 0 40		J8C 5	BSI		F000	A,Q # M,M&1 FAILED	3A156130
OF4C 0 31		J8C6	DC BSI		/3156	ERR ID	3A156140
0F4E 0 76		JOCO	MDX		F005 B8C2	CK LOCK ON ERROR	3A156150 3A156160
0F4F 0 70			MDX		M8CO	EXIT TO NEXT ROUTINE	3A156170
0F50 0 10		NBA1	DC		/1000	EXT. 10 MEX! KOOTINE	3A156180
0F51 0 40		N8A2	DC		/4000		3A156190
0F52 0 20	-	N8A3	DC		/2000		3A156200
	000		BSS	E	0		3A156210
0F54 0 80	000	NBC5	DC	_	/8000	•	3A156220
0F55 0 00	000	NBAO	DC		/0000		3A156230
0F56 0 80		NBC6	DC		/8000		3A156240
0F57 0 00	001		DC		/0001		3A156250
0F58 0 00	000	N8C7	DC		/0000		3A156260
OF 59 0 80			DC		/8000		3A156270
0F5A 0 00		N8C8	DC		/0000		3A156280
OF58 0 80	001		DC		/8001		3A156290
		*****	*****	***	******	*******	3A156300
		****	*****	***	*******	******	3A156310
				***	********	**************	
	DATA OR	*LA- (	DPER-				3A156330
ADDR 1	INSTRUCTION	*BEL	ATION	FT	OPERANDS &	REMARKS IDESEQ# AT RIGHT	3A156340
******	INSTRUCTION	*****	*****	FT ***	******	***********	3A156350
0F5C 0 0	INSTRUCTION ************************************	*BEL /	***** XIO	FT ***	**************************************	READ SWITCHES	3A156350 3A156360
0F5C 0 00	INSTRUCTION *********** 809 00A	*****	XIO XIO	FT ***	**************************************	READ SWITCHES LD SW BITS	3A156350 3A156360 3A156370
0F5C 0 00 0F5D 0 C0 0F5E 0 10	INSTRUCTION ************************************	*****	XIO LD SRA	FT ****	**************************************	**************************************	3A156350 3A156360 3A156370 3A156380
0F5C 0 00 0F5D 0 C0 0F5E 0 10 0F5F 0 40	INSTRUCTION ************************************	*****	XIO LD SRA BSC	FT ****	**************************************	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. 1S SWITCH 11 ON	3A156350 3A156360 3A156370 3A156380 3A156390
0F5C 0 00 0F5D 0 C0 0F5E 0 10 0F5F 0 40 0F60 0 70	INSTRUCTION ************************************	*****	XIO LD SRA BSC MDX	FT ***	**************************************	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. IS SWITCH 11 ON SWITCH 11 ON	3A156350 3A156360 3A156370 3A156380 3A156390 3A156400
0F5C 0 00 0F5D 0 C0 0F5E 0 10 0F5F 0 40 0F60 0 70 0F61 0 C0	INSTRUCTION ********* 809 00A 804 804 002	******* W8C0	XIO LD SRA BSC MDX LD	FT ****	**************************************	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. IS SWITCH 11 ON SWITCH 11 ON SWITCH 11 IS OFF-WAIT	3A156350 3A156360 3A156370 3A156380 3A156390 3A156400 3A156410
0F5C 0 00 0F5D 0 C0 0F5E 0 10 0F5F 0 40 0F60 0 70 0F61 0 C0 0F62 0 30	INSTRUCTION ********* 809 00A 804 804 002 003	**************************************	XIO LD SRA BSC MDX LD DC	***	N8C1 N8C3 4 E W8C4 2020 /3003	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. IS SWITCH 11 ON SWITCH 11 ON	3A156350 3A156360 3A156370 3A156380 3A156390 3A156400 3A156410 3A156420
0F5C 0 00 0F5D 0 CC 0F5E 0 10 0F5E 0 70 0F60 0 70 0F61 0 CC 0F62 0 30 0F63 0 40	INSTRUCTION ********** 809 00A 804 804 002 003 003 C00 0154	X007 W8C4	XIO LD SRA BSC MDX LD DC BSC	FT:***	**************************************	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. IS SWITCH 11 ON SWITCH 11 ON SWITCH 11 IS OFF-WAIT	3A156350 3A156360 3A156370 3A156380 3A156390 3A156400 3A156410 3A156420 3A156430
0F5C 0 06 0F5D 0 C0 0F5E 0 16 0F5F 0 46 0F60 0 76 0F61 0 C0 0F62 0 36 0F63 0 46	INSTRUCTION ********** 809 00A 804 804 002 003 003 C00 0154	**************************************	XIO LD SRA BSC MDX LD DC BSC DC	***	N8C1 N8C3 4 E W8C4 2020 /3003	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. IS SWITCH 11 ON SWITCH 11 ON SWITCH 11 IS OFF-WAIT	3A156350 3A156360 3A156370 3A156380 3A156390 3A156400 3A156410 3A156420 3A156430 3A156440
0F5C 0 06 0F5D 0 C0 0F5E 0 16 0F5F 0 46 0F60 0 76 0F61 0 C0 0F62 0 36 0F63 0 46	INSTRUCTION *********** 809 804 804 802 003 003 C00 0154	X007 W8C4	XIO LD SRA BSC MDX LD DC BSC	L	**************************************	READ SWITCHES LD SW BITS PLACE SW 11 AT BIT 15 POS. IS SWITCH 11 ON SWITCH 11 ON SWITCH 11 IS OFF-WAIT	3A156350 3A156360 3A156370 3A156380 3A156390 3A156400 3A156410 3A156420 3A156430

VE** V								
U-06 U	0F68		N8C1	DC		N8C3		3A156460
0F67 0			NBC 2	DC		/0240	EQUAL /3A00 IN 1130	3A156470
0F68 0	0000		N8C3	DC		/0000		3A156480
			*					3A156490
			*				-	3 <b>A</b> 156500
			****	*****	****	*******	******	3A156510
			*					3A156520
			*			ERRO	OR CONTROL ROUTINE	3A156530
25/2 2			*			_		3A156540
0F69 0			F000	DC		0	REENTER ADDRESS	3A156550
0F6A 0				STS		FOOX	SAVE STATUS	3A156560
0F6B 0				STO		U000	SAVE A REG	3A156570
0F6C 0				RTE		16	6445 0 050	3A156580
0F6E 0				OTS OIX		U001	SAVE Q REG	3A156590
0F6F 0						F003	READ SWITCHES	3A156600
0F70 0				LD Sra		Z 0 0 0 7	LD SW READINGS	3A156610
0F71 0				BSC		E	PLACE SW 8 AT BIT POS 15	3A156620
0F72 0				MDX		FOOA	CK LOOP ON INSTRUCTION  * BEING TESTED SW	3A156630
0F73 0		0669		LD	ı	F000	GET WAIT ERROR ID	3A156640 3A156650
0F75 0		0.07		STO	•	F002	STORE ERROR ID AT FOO2	3A156660
0F76 0				LD		F000	GET RETURN ADDR	3A156670
0F77 0				STO		U008	STORE AT UOOB	3A156680
0F78 0				A		U006	ADD ONE	3A156690
0F79 0		•		STO		F000	STORE NEW RETURN ADDRESS	3A156700
OF7A O			FOOL	LD		2000	CK BYPASS ERROR SW	3A156710
0F7B 0				SRA		1	PLACE SW 14 AT BIT POS 15	3A156720
OF7C O	4804			BSC		Ē	SKIP IF SW 14 OFF	3A156730
0F7D 0				MDX		FOOF	CK FOR 8 OR 12 ON ALSO	3A156740
0F7E 0	C051			LD		U001	RESTORE REG AND WAIT	3A156750
0F7F 0	1800			RTE		16	PLACE IN Q REG	3A156760
0F80 0	CO4E			LD		U000	RESTORE A REG	3A156770
0F81 0	2000		FOOX	LDS		0	RESTORE C AND OF IND.	3A156780
0F82 0	3000		F002	WAIT		0	ERROR WAIT B REG	3A156790
			*				* SHOWS ERROR ID	3A156800
0F83 0	4C 80	0F69	FOOB	BSC	I	F000	EXIT FROM ROUTINE	3A156810
			*				* C%F000=IS NOW ONE	3A156820
			*				* GREATER THAN AT THE	3A156830
			*				* BEGINNING OF ROUTINE	3A156840
								3A156850
			*					3A156860
			*					2455/070
			*			LOOF	ON INSTRUCTION BEING	3A156870
			•					3A156880
			*				STED	
			*					3A156880
					***	* TE		3A156880 3A156890 3A156900 3A156910
CORE	DATA	OR	*LA-	OPER-		* TE	:STED	3A156880 3A156890 3A156900 3A156910 3A156920
CORE ADDR	DATA 1 NST	OR RUCTION	*LA- *BEL	OPER- ATION	FT	* TE *************  OPERANDS &	:STED ************************************	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930
CORE ADDR	DATA INST ****	OR RUCTION	*LA- *BEL *****	OPER- ATION *****	FT	* TE	STED  ***********************************	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930 3A156940
CORE ADDR **********************************	DATA INST ***** COE3	OR RUCTION	*LA- *BEL	OPER- ATION ***** LD	FT	* TE	**************************************	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930 3A156940 3A156950
CORE ADDR ******* 0F85 0 0F86 0	DATA INST ***** COE3 DO10	OR RUCTION	*LA- *BEL *****	OPER- ATION ***** LD STO	FT	* TE	ESTED  REMARKS ID&SEQ# AT RIGHT  RET RETURN ADDR AT FOOO  STORE RETURN ADDRESS	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930 3A156940 3A156950 3A156960
CORE ADDR ******** 0F85 0 0F86 0 0F87 0	DATA 1NST ****** COE3 DO10 800D	OR RUCTION	*LA- *BEL *****	OPER- ATION ****** LD STO A	FT	* TE	REMARKS ID&SEQ# AT RIGHT SECTION ADDRESS ADD 3	3A156880 3A156890 3A156900 3A156910 3A156920 3A156940 3A156950 3A156960 3A156970
CORE ADDR ******** 0F85 0 0F86 0 0F87 0 0F88 0	DATA 1NST ****** COE3 DO10 800D DOE0	OR RUCTION	*LA- *BEL *****	OPER- ATION ****** LD STO A STO	FT ****	PERANDS &	REMARKS 1D&SEQ# AT RIGHT  GET RETURN ADDR AT FOOD STORE RETURN ADDRESS ADD 3 UPDATE RETURN ADDRESS	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930 3A156940 3A156950 3A156970 3A156970
CORE ADDR ******** 0F85 0 0F86 0 0F87 0	DATA 1NST ****** COE3 DO10 800D DOE0	OR RUCTION	*LA- *BEL *****	OPER- ATION ****** LD STO A	FT	* TE	REMARKS ID&SEQ# AT RIGHT GET RETURN ADDR AT FOOO STORE RETURN ADDRESS ADD 3 UPDATE RETURN ADDRESS BR TO UPDATAD ADDRESS	3A156880 3A156890 3A156900 3A156920 3A156930 3A156940 3A156960 3A156960 3A156960 3A156960 3A156980
CORE ADDR **********************************	DATA 1NST ****** COE3 DO10 800D DOE0 4C80	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ****** LD STO A STO BSC	FT ****	PERANDS 8	REMARKS ID&SEQ# AT RIGHT REMARKS ID&SEQ# AT RIGHT REMARKS ID&SEQ# AT RIGHT REMARKS ID&SEQ# AT RIGHT RETURN ADDR AT FOOO STORE RETURN ADDRESS ADD 3 UPDATE RETURN ADDRESS BR TO UPDATAD ADDRESS CK FOR SW 8 OR 12	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930 3A156940 3A156960 3A156960 3A156970 3A156990 3A156990
CORE ADDR **********************************	DATA 1NST ****** COE3 DO10 800D DOE0 4C80	OR RUCTION	*LA- *BEL *****	OPER- ATION ******* LD STO A STO BSC	FT ****	* TE  *********  OPERANDS &  ********  F000  U00B  U003  F000  F000	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS ADD 3  UPDATE RETURN ADDRESS BR TO UPDATAD ADDRESS CK FOR SM 8 OR 12  PLACE SM 12 AT BIT POS 15	3A156880 3A156890 3A156900 3A156910 3A156920 3A156930 3A156950 3A156960 3A156970 3A156990 3A156990 3A157000
CORE ADDR **********************************	DATA 1NST 1NST COE3 DO10 800D DOE0 4C80 1802 4804	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ******* LD STO A STO BSC SRA BSC	FT ****	* TE  *******  OPERANDS &  *******  F000  U00B  U003  F000  F000	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS  ADD 3  UPDATE RETURN ADDRESS  BR TO UPDATAD ADDRESS  CK FOR SM 8 OR 12  PLACE SM 12 AT BIT POS 15  SKIP IF SM 12 OFF	3A156880 3A156890 3A156900 3A156920 3A156930 3A156940 3A156950 3A156960 3A156970 3A156980 3A156980 3A157000 3A157000 3A157000
CORE ADDR **********************************	DATA 1NST ****** COE3 DO10 800D DOE0 4C80 1802 4804 70F5	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ******* LD STO A STO BSC SRA BSC MDX	FT ****	* TE  *********  ********  ********  ******	REMARKS 1D&SEQ# AT RIGHT  REMARKS 1D&SEQ# AT RIGHT  GET RETURN ADDR AT FOOO STORE RETURN ADDRESS ADD 3 UPDATE RETURN ADDRESS BR TO UPDATAD ADDRESS CK FOR SW B OR 12 PLACE SW 12 AT BIT POS 15 SKIP IF SW 12 OFF BR TO EXIT IF SW 12 ON	3A156880 3A156890 3A156910 3A156920 3A156930 3A156940 3A156960 3A156970 3A156970 3A156980 3A157000 3A157000 3A157000 3A157020 3A157020
CORE ADDR **********************************	DATA 1NST 1NST COE3 DO10 800D DOE0 4C80 1802 4804 70F5 1804	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ******* LD STO A STO BSC SRA BSC MDX SRA	FT ****	PERANDS 8  F000 U00B U003 F000 F000 2 E F00B 4	REMARKS 1D&SEQ# AT RIGHT  REMARKS 1D&SEQ# AT RIGHT  RETURN ADDR AT FOOO STORE RETURN ADDRESS ADD 3 UPDATE RETURN ADDRESS BR TO UPDATAD ADDRESS CK FOR SM 8 OR 12 PLACE SW 12 AT BIT POS 15 SKIP IF SM 12 ON PLACE SW 8 AT BIT POS 15	3A156880 3A156890 3A156900 3A156920 3A156930 3A156940 3A156960 3A156960 3A156960 3A156960 3A157000 3A157000 3A157020 3A157020 3A157040
CORE ADDR **********************************	DATA 1NST 1NST 1NST 1NST 1NST 1NST 1NST 100 800D 10E0 4C80 1802 4804 70F5 1804 4804	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ****** LD STO A STO BSC SRA BSC MDX SRA BSC	FT ****	PERANDS 6 ********** F000 U008 U003 F000 F000 2 E F000 4 E	REMARKS ID&SEQ# AT RIGHT RETURN ADDRESS ADD 3 UPDATE RETURN ADDRESS BR TO UPDATAD ADDRESS CK FOR SW 8 OR 12 PLACE SW 12 AT BIT POS 15 SKIP IF SW 12 OFF BR TO EXIT IF SW 12 ON PLACE SW 8 AT BIT POS 15 SKIP IF SW 8 OFF	3A156880 3A156890 3A156900 3A156920 3A156920 3A156940 3A156950 3A156960 3A156980 3A157000 3A157000 3A157020 3A157020 3A157020 3A157050
CORE ADDR **********************************	DATA 1NST 1NST 1NST 2010 800D 00E0 4C80 1802 4804 70F5 1804 4804 70F2	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ****** LD STO A STO BSC SRA BSC MDX SRA BSC MDX	FT ****	PERANDS &	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS  ADD 3  UPDATE RETURN ADDRESS  BR TO UPDATAD ADDRESS  CK FOR SW 8 OR 12  PLACE SW 12 AT BIT POS 15  SKIP IF SW 12 OFF  BR TO EXIT IF SW 12 ON  PLACE SW 8 AT BIT POS 15  SKIP IF SW 8 OFF  BR TO EXIT IF SW 8 ON	3A156880 3A156890 3A156900 3A156920 3A156930 3A156940 3A156950 3A156960 3A156980 3A156980 3A157000 3A157000 3A157020 3A157020 3A157040 3A157050 3A157050 3A157060
CORE ADDR **********************************	DATA 1NST ******* COE3 DO10 8000 DOE0 4C80 1802 4804 70F5 1804 70F2 CO43	OR RUCTION	*LA- *BEL ***** FOOA	OPER- ATION ****** LD STO A STO BSC SRA BSC MDX SRA BSC MDX LD	FT ****	PERANDS 6 ********* F000 U008 U003 F000 F000 2 E F000 4 E	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS  ADD 3  UPDATE RETURN ADDRESS  BR TO UPDATAD ADDRESS  CK FOR SW 8 OR 12  PLACE SW 12 AT BIT POS 15  SKIP IF SW 12 OFF  BR TO EXIT IF SW 12 ON  PLACE SW 8 AT BIT POS 15  SKIP IF SW 8 OFF  BR TO EXIT IF SW 8 ON  LD SWITCH READINGS	3A156880 3A156890 3A156910 3A156920 3A156930 3A156940 3A156950 3A156970 3A156970 3A156970 3A157010 3A157020 3A157020 3A157040 3A157040 3A157050 3A157060 3A157060 3A157070
CORE ADDR **********************************	DATA 1NST ******* COE3 DO10 BODO 4C80 1802 4804 70F5 1804 4804 70F2 CO43 0000	OR RUCTION	*LA- *BEL ***** FOOA	OPER-ATION ******* LD STO A STC BSC SRA BSC MDX SRA BSC MDX LD DC	FT ****	PERANDS & ***********************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS  ADD 3  UPDATE RETURN ADDRESS  BR TO UPDATAD ADDRESS  CK FOR SM 8 OR 12  PLACE SM 12 AT BIT POS 15  SKIP IF SM 12 OFF  BR TO EXIT IF SM 12 ON  PLACE SM 8 AT BIT POS 15  SKIP IF SM 8 OFF  BR TO EXIT IF SM 8 ON  LD SWITCH READINGS  IMPROPER BIT SWS, 14 ON	3A156880 3A156890 3A156910 3A156920 3A156930 3A156940 3A156960 3A156970 3A156970 3A157010 3A157010 3A157020 3A157030 3A157040 3A157050 3A157050 3A157060 3A157060 3A157060
CORE ADDR **********************************	DATA 1NST ******* COE3 D010 800D D0E0 4C80 1802 4804 70F5 1804 4804 70F5 2004 0000 083E	OR RUCTION	*LA- *BEL ***** FOOA	OPER-ATION ****** LD STO A STO BSC SRA BSC MDX SRA BSC MDX LD C XIO	FT ****	PERANDS & ***********************************	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS  ADD 3  UPDATE RETURN ADDRESS  BR TO UPDATAD ADDRESS  CK FOR SW 8 OR 12  PLACE SW 12 AT BIT POS 15  SKIP IF SW 12 OFF  BR TO EXIT IF SW 12 ON  PLACE SW 8 AT BIT POS 15  SKIP IF SW 8 OFF  BR TO EXIT IF SW 8 ON  LD SWITCH READINGS	3A156880 3A156890 3A156990 3A156920 3A156930 3A156940 3A156960 3A156970 3A156970 3A157000 3A157000 3A157020 3A157040 3A157050 3A157050 3A157060 3A157060 3A157070 3A157080 3A157080
CORE ADDR **********************************	DATA 1NST ******* COE3 DO10 800D DOE0 4C80 1802 4804 70F5 1804 4804 70F2 CO03 0000 083E 70E5	OR RUCTION	*LA- *BEL ****** FOOA	OPER- ATION ****** LD STO A STO BSC SRA BSC MDX SRA BSC MDX LD C XIO MDX	FT ****	PERANDS & FOOO UOOB UOOB FOOO FOOO FOOO FOOO FOOO	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A156880 3A156890 3A156990 3A156920 3A156930 3A156940 3A156950 3A156980 3A156980 3A157000 3A157000 3A157020 3A157020 3A157050 3A157050 3A157050 3A157060 3A157060 3A157080 3A157080
CORE ADDR **********************************	DATA 1NST ******* COE3 DO10 800D DOE0 4C80 1802 4804 70F5 1804 4804 70F2 CO43 0000 083E 70E5	OR RUCTION	*LA- *BEL ****** FOOA * FOOF	OPER- ATION ****** LD STO A STO BSC SRA BSC MDX LD DC XIO MDX DC	FT ****	PERANDS 8  F000 U00B U003 F000 2 E F00B 4 E F00B Z000 F003 F000 3	REMARKS ID&SEQ# AT RIGHT  RETURN ADDR AT FOOO  STORE RETURN ADDRESS  ADD 3  UPDATE RETURN ADDRESS  BR TO UPDATAD ADDRESS  CK FOR SW B OR 12  PLACE SW 12 AT BIT POS 15  SKIP IF SW 12 OFF  BR TO EXIT IF SW 12 ON  PLACE SW B AT BIT POS 15  SKIP IF SW B OFF  BR TO EXIT IF SW B ON  LD SWITCH READINGS  IMPROPER BIT SWS, 14 ON  *WITHOUT 8 OR 12 ON  CONSTANT 3	3A156880 3A156890 3A156910 3A156910 3A156920 3A156930 3A156940 3A156960 3A156980 3A156980 3A157020 3A157020 3A157020 3A157050 3A157050 3A157060 3A157060 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080 3A157080
CORE ADDR **********************************	DATA 1NST ******** COE3 DO10 800D DOE0 4C80 1802 4804 70F5 1804 4804 4804 70F2 CO43 0000 083E 70E2 0003 FFFD	OR RUCTION	*LA- *BEL ****** FOOA	OPER- ATION ****** LD STO A STO BSC SRA BSC MDX SRA BSC MDX LD C XIO MDX	FT ****	PERANDS & FOOO UOOB UOOB FOOO FOOO FOOO FOOO FOOO	REMARKS ID&SEQ# AT RIGHT  REMARKS ID&SEQ# AT	3A156880 3A156890 3A156990 3A156920 3A156930 3A156940 3A156950 3A156980 3A156980 3A157000 3A157000 3A157020 3A157020 3A157050 3A157050 3A157050 3A157060 3A157060 3A157080 3A157080

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	****	*****	***	*******	*****	3A157150
	*					3A157160
	*			LOCK	ON ERROR RT	3A157170
	*					3A157180
*************	****	****	***	******	***************	3A157190
CORE DATA OR	*LA-	OPER-		-		3A157200
ADDR INSTRUCTION						
*************	****	****	***	******	*************	3A157220
0F98 0 0000	FOOE	DC		0	CONTAINS RETURN ADDRESS	3A157230
0F99 0 281A		STS		F00H	SAVE REGS C AND OF	3A157240
0F9A 0 D03B		STO		uoox	ACCUMULATOR	3A157250
0F9B 0 18D0		RTE		16 U00x£1	ACC EVIENTION	3A157260 3A157270
0F9C 0 D03A	*	STO		000861	ACC EXTENTION	3A157280
		****	***	******	********	3A157290
				R RESTART	*	3A157300
	*			K KEJIAKI	•	3A157310
		O RES	TAR	T PRESS	STOP, RESET AND START. *	3A157320
	*				*	3A157330
OF9D O CO3A		LD		RST1	LD /6004	3A157340
	*				•	3A157350
OF9E O D400 0000		STO	L	/0000	STO IN WORD ZERO	3A157360
	*				*	3A157370
OFAO O CO38		LD		RST2	LD /4C00	3A157380
	*				±	3A157390
OFA1 0 D400 0004	_	STO	L	/0004	STO IN WORD FOUR	3A157400
0513 0 5034	*			DCTACI	LD /012C	3A157410 3A157420
OFA3 0 CO36	*	LD		RST2&1	LD 7012C	3A157430
OFA4 0 D400 0005	-	STO	L	/0005	STO IN WORD FIVE	3A157440
0FA4 0 D400 0005	*	310	-	70003	310 IN WORD 1 1VE	3A157450
	****	****	***	*******	********	3A157460
OFA6 0 082B		XIO		F003	READ SWITCHES	3A157470
OFAT O CO2D		LD		Z000	CK LOOP ON INST BEING	3A157480
OFA8 0 1807		SRA		7	* TESTED SW	3A157490
OFA9 0 4804		BSC		E	SKIP IF EVEN	3A157500
OFAA O 700A		MDX		F008	EXIT TO LOOP INST	3A157510
OFAB O COEB		LD		UOOB	CK IF ERROR HAS	3A157520
OFAC 0 4820		BSC		2	* OCCURRED	3A157530
OFAD 0 7009		MDX		F009	ADDD	3A157540
OFAE O COE9	FOOK	LD		FOOE	GOT RETURN ADDR	3A157550
OFAF 0 8024 OFBO 0 DOE7		A Sto		U006 F00E	ADD DNE Store return address	3A157560 3A157570
0FB1 0 C025		LD		U00X&1	RESTORE REGS	3A157580
OFB2 0 18D0		RTE		16	NESTONE NESS	3A157590
OFB3 O CO22		LD		υσοχ		3A157600
OFB4 0 2000	F00H	LDS		0	SET C AND OF OFF	3A157610
OFB5 0 4C80 OF98	F008	BSC	1	FOOE	BR TO RETURN ADDRESS	3A157620
OFB7 O CO1D	F009	LD		2000	CHECK LOCK ON ERROR SW	3A157630
OFB8 0 1803		SRA		3	SHIFT BIT 12 TO POS 15	3A157640
OFB9 0 4804		BSC		E	SKIP IF OFF	3A157650
OFBA 0 7003		MDX		FOOC	ERROR SW #B 12 ON	3A157660
OFBB 0 1810		SRA		16	RESET ERROR OCCURRED	3A157670
OFBC O DODA OFBD O 70FO		STO		UOOB Fook	* CONTROL BR TO GET RETURN ADDRESS	3A157680 3A157690
0FBE 0 COD9	FOOC	LD		FOOE	GOT ADDR	3A157700
OFBF 0 80D6	. 500	A		UOOA	ADD MINUS THREE	3A157710
0FC0 0 F006		EOR		U008	COMPARE TO ERR CONTR	3A157720
	*				* ADDR	3A157730
OFC1 0 4820		BSC		Z	SKIP ON ZERO	3A157740
OFC2 O 70EB		MDX		FOOK	BR TO GET RETURN ADDRESS	3A157750
OFC3 0 70F1		MDX		F008	EXIT	3A157760
	*					3A157770
		*****	***	********	*********	3A157780
	*				CK LOOP RT. SW RT	3A157790
*****	*	****	**	****	**********	3A157800
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CORE ADDR *****	**		*BEL	OPER-			REMARKS ID&SEQ# AT RIGHT	3A157820 3A157830 3A157840
OFC4	0	0000	F005	DC		0	WILL CONTAIN RETURN ADDR	3A157850
OFC5	0	080C		XIO		F003	READ SWS - PLACE IN LABEL	3A157860
			*				* ADDRESS ZOOO	3A157870
OFC6	0	C00E		LD		2000	CK LOOP ROUTINE SW	3A15788
OFC7	0	1805		SRA		5	CHECK FOR BIT 11	3A157890
OFC8	0	4804		BSC		E	NO SKIP FOR LOOP	3A15790
OFC9	0	7003		MDX		F00G	LOOP ROUTINE SWITCH ON	3A15791
OFCA	0	COF9		LD		F005	LD RETURN ADDRESS	3A15792
OFCB	0	DOCC		STO		F O O E	SAVE FOR LOCK ON ERROR RTN	3A157930
DFCC	0	70CC		MDX		F00E&1	BR TO SAVE REGISTERS	3A15794
DFCD	0	4C80 0FC4	FOOG	BSC	I	Ė005	BR TO MAIN PROGRAM	3A15795
			*				* RETURN ADDRESS	3A15796
DFCF	0	0000	U000	DC		/0000	A REG SAVED HERE	3A15797
OFDO	0	0000	U001	DC		/0000	Q REG SAVED HERE	3A15798
OFD2		0000		BSS	E			3A15799
OFD2	0	OFD5	F003	DC		2000		3A15800
OFD3	0	0240	F004	DC		/0240	EQUAL /3A00 IN 1130	3A15801
OFD4	0	0001	U006	DC		/0001		3A15802
OFD5	0	0000	2000	DC		/0000	SW READING STORED HERE	3A15803
OFD6		0002	UOOX	BSS		2	SAVED FOR A&Q STORAGE	3A15804
OFD8	0	6004	RST1	LDX		/0004	•	3A15805
OFD9	0	4C00 012E	RST2	BSC	L	080A		3A15806
OFDC		012D		END		X000		3A15807
NO S	ST	ATEMENTS FLAG	GED IN	I THE	ABO	VE ASSEMBLY		

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A6C2

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       OFCD
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FO0H
       OFB4
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       OFAE OFBD.OFC2
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              OFAD
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        017D
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0D27,0F6E,0F93,0FA6,0FC5

0F82 0F75

OFD2

CPU FUNCTION TEST

F002

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62C8
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0333 032E
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        0267 0265
G20C
        0268 026F
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0231 022D
6201
        0236 0232
6202
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               0236
6203
        023E 023A
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        0242 0240
6205
        0247 0243
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G207
        024F 024D
0254 0252
G208
        024B 0247
6209
        0258 0256
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02F5 02F0
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G282
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G3C2
G3C4
        03F0 03EB
03FE 03F9
G3C6
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G3D2
        0356 0351
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G340
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0370 0368
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G38A
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€38C
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638E
6380
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0388 0383
6382
        0392 038D
6384
        0390 0397
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G388
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G4CC
G4CD
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        05BB 05B6
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        057A 0576
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G4C8
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644D
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        04C6 04C1
6443
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G5C8
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070B 0706
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        08D4 08CB
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G672
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G68A
G68C
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G7CC
       OC2F OC2A
G7CE
      OC38 OC33
G7C0
G7C2
      OBF4 OBFF
OBFE OBF9
G7C4
G7C6
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       OC12 OCOD
G7C8
      OC1C OC17
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G70C
G70E
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0A9C 0A8C
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G706
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G74C
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       OAC1 OABC
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G748
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GBOE
       OCB1 OCAC
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0C7B 0C76
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H849
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02AC 02A0,02B3

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      0D49
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      022A 022C
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      026E 0262
N203
      026F 0267
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       053E
             04DA, 04E7
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       053F
             04F9
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       0659 0500,0696
N501
       065A 05DB
N502
N503
       065B 05F2,0642
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CPU FUNCTION TEST

```
N504 065C 061A
      065D 0645,0646,0675,0676
N505
      065E 0647
N506
      05E6 05DC
N507
      065F 0677,0681,068B,06CD
N542
N6CA
      09D6 095C
      09D7 0974,0A03,0A0D
N6CB
       09D8 09A3, 0A01, 0A0F
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N6CF
       09DA 0984,0988
       09CC 0957,09CC,09DF
N6C0
       09CD 09CD,09DC,09E8,09F4,09F7
N6C1
N6C2
       09CE 09CE, 09EB
N6C3
       09CF 09CF
             0955,096D,0985,0987,099C,0986,09D0,09D9
N6C4
       0900
       09D1 099E,09D1
N6C5
       09D2
             09D2
N6C7
       0903 0903
       0904 096F,09D4
N6C8
             095A,095B,0972,0973,098A,098B,09A1,09A2,09B9,09BA
       09D5
N6C9
N6F0
       OALD OALA
       0A28 0A19,0A1E,0A28
N6F1
       DAZD DAZA
N6F2
N6F3
       0A31 0A2E
            07CB,07D8,07E5,0801,080B
07A2,07A4,07AF,07B1,07BC,07BE,07C9,07D6,07E3,07F1,07FF,080C
N600
       080B
       3080
N601
             07F3,080D
N602
       080D
       080E 07AE,07BB,07C8,07D5,07E2,07F0,07FC
N603
       080F 07FF
N604
             0811,0813,081D,0828,082A,082B,0835,0837,0838,0842,0844,0845,084F
N640
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       087C
             081E
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       08C8 0883,0884,088D,088E,089B,089C,08A5,08A6,08B3,08B4,08BD,08BE
       08DB 08CA
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             OBEE
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       0040 0001,0002,0016,0028
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             OA6A
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        0B74
             0811
        0B75 0B3B
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 N74C
             OAAD, OAC4, OADC, OAEF, 0806, 081A, 0830, 0844
 N740
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        0872 0AD8,0857
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        0878 0818,0845,0863
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      08E9 08C3
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       OBE 1
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N782
       OBE2
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       OBE 4
N785
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N788
       OBE8 0891
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N8A1
             OEDE,0EE8,0F06
N8A2
       0F51
       OF52 OEFC
N8A3
       0F66 0F5C
N8C1
       0F67 0298,02A7
N8C2
NBC3
       OF68 OF5D.0F66
       0F54
             OFOF, OF25
NBC5
             0F24,0F2D,0F36
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N8C6
NAC 7
       0F58
            0F3E.0F46.0F47
       OF5A
OCEA
            OF3F
NBCB
AOSM
             OCB5
       OCEC OCCO
NBOC
NBOE
       OCEE OC9C,OCCB
       OCEF OD11
NBOF
       OCE1 0C48,0C74,0C88
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N802
       OCE2 OC44
             OC71
 N804
       OCE4
 N806
       OCE6 OC9B
       OCE7 OCA6, OCAB, OCCC, OCD7, OD4A
 N807
       OCES OCAA,OCB6
 N808
       OCFO OCD6
 N810
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 N811
       OCF2 0C46,0C4A,0CC1
 N812
 N813
       OCF3 OC72.0C75
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       0CF5 0D06
0CF6 0D05
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N824
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             0082
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        OED2
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             0E78
       OED3
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        0ED4 0E08,0E90
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             0E51
             0DD4,0DDF,0E07,0E09,0E2D,0E2F,0E6E,0E6F,0E8E,0E8F,0EAE,0EB0
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        0EC8
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        OECB OE1E.OE31
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        OECC ODFD, 0E20, 0E23, 0E7C, 0EA5
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        OFD9 OFAO, OFA3
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 $501
        0651
             0644
        0654 0648
 $503
        0F96
             OFBF
 400U
             OF77, OF86, OFAB, OFBC, OFCO
        0F97
 UOOB
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N78A

OBEA

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UOOX OFD6 OF9A,OF9C,OF81,OF83

UOOO OFCF OF68,OF80

UOO1 OFDO OF6D,OF7E

UOO3 OF95 OF87

UOO6 OFD4 OF78,OFAF

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V168 024E 0248

V170 0253 0250

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W8C4 OF63 OF60

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END OF ASSEMBLY

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## BASIC DIAGNOSTIC LOADER

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# BASIC DIAGNOSTIC LOADER

### 1. PURPOSE

THE 1130 BASIC DIAGNOSTIC LOADER IS A SELF-CHECKING PROGRAM DESIGNED TO LOAD AND VERIFY LOADING OF DIAGNOSTIC-CARD OR PAPER TAPE PROGRAMS PUNCHED IN 8-8 FORMAT.

#### 2. PREREQUISITES

2.1 PROGRAM PREREQUISITES

THE BASIC LOADER WILL ONLY LOAD PROGRAM DECKS WHICH ARE PUNCHED IN THE 8-8 FORMAT DESCRIBED IN SECTION 6.1.

- 2.2 EQUIPMENT PREREQUISITES
  - A. 1131 CENTRAL PROCESSING UNIT (CPU).

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

R. 1442 CARD READ/PUNCH, OR, PAPER TAPE READER.

#### 3. USE PROCEDURE

- 3.1 NORMAL LOADING PROCEDURE
  - 4. AT 1442 CARD READ/PUNCH.
    - 1. DEPRESS NPRO PUSHBUTTON TO CLEAR FEED.
    - 2. PLACE BASIC LOADER DECK, FOLLOWED BY MAIN PROGRAM AND TWO BLANK CARDS IN HOPPER.
    - 3. DEPRESS START PUSHBUTTON. READY INDICATOR SHOULD LIGHT.
  - B. AT PAPER TAPE READER
    - 1. SET TAPE IN READER
    - 2. MAKE READER READY
  - C. AT 1131 CPU,
    - 1. PUSH RESET.
    - 2. PUSH PROGRAM LOAD. MAIN PROGRAM SHOULD LOAD AND BEGIN EXECUTION.
    - 3. IF PROGRAM FAILS TO LOAD OR HALTS AT A WAIT INSTRUCTION BELOW LOCATION 012C, REFER TO SECTION 3.2
- 3.2 DIAGNOSTIC LOADING PROCEDURE
  - 1. SET INTERRUPT DELAY SWITCH (ON CE PANEL) TO ON POSITION.
  - 2. RETRY LOADING PROCEDURE.

IF PROGRAM LOADS, RUN CPU AND INTERRUPT TESTS TO DIAGNOSE NORMAL LOADER FAILURE.

IF PROGRAM DOES NOT LOAD, REFER TO SECTION 3.3

3 DIAGNOSTIC GUIDE

#### NOTE

ALL REGISTER-CONTENT INDICATIONS IN FOLLOWING STEPS ARE EXPRESSED IN HEXADECIMAL NOTATION. ALL ADDRSESSES APPLY TO BOTH PAPER TAPE AND CARD VERSIONS OF THE PROGRAM.

### FAILURE DESCRIPTION SUGGESTED ACTION + POSSIBLE CAUSE OF FAILURE

1. NO CARD FEEDS REFER TO PROGRAM LOAD TESTS. POSSIBLE FAILURE OF EITHER PROGRAM—LOAD MODE OR READER.

### BASIC DIAGNOSTIC LOADER

2. FIRST CARD REFER TO PROGRAM LOAD TESTS. FEEDS BUT IS NOT POSSIBLE FAILURE OF READER. READ CORRECTLY.

3. FIRST CARD IS READ CORRECTLY BUT NOT ABLE TO LOAD REMAINDER OF LDADER.

REFER TO ONE-CARD PROGRAMS. POSSIBLE FAILURE OF CPU INSTRUCTIONS USED TO BODTSTRAP LOADER.

4. MAIN PROGRAM

CHECK THAT LAST CARD OF PROGRAM, WHICH IS STARTS EXECUTING PUNCHED WITH FF IN COLUMNS 79 AND 80. BEFORE ALL CARDS IS NOT OUT OF SEQUENCE. IF CARD IS IN SEQUENCE, HAVE BEEN LOADED. A READING PROBLEM IS INDICATED.

ALL CARDS FEED SEE IF LAST CARD WENT PAST THE READ STATION BUT MAIN PROGRAM OF THE 1442. IF IT DID, RUN ONE-CARD DID NOT EXECUTE. DIAGNOSTIC PROGRAMS. CHECK THAT MAIN PROGRAM IS FOLLOWED BY TWO BLANK CARDS.

### ERROR WAITS

SBR	LOCATION	MEANING
30F1	<b>0</b> 01E	PROGRAM STOPPED BECAUSE CHECKSUM FOR FIRST CARD WAS NOT CORRECT (0000). CHECK THAT LOCATIONS 0000 TO 001E WERE READ CORRECTLY BY COMPARING WITH LISTING. IF NOT LOADED CORRECTLY, REFER TO PROGRAM LOAD TESTS. IF LOCATIONS WERE LOADED CORRECTLY, RUN ONE-CARD PROGRAMS TO HELP ISOLATE PROBLEM.
30F2	002F	PROGRAM STOPPED BECAUSE OF DSW ERROR. THE ONLY VALID WORDS ARE 8003, 0003, AND 0800. DETERMINE CAUSE OF DSW ERROR AND CORRECT. RELOAD AFTER REPAIRING.
30F3	004F	PROGRAM STOPPED BECAUSE FIRST WORD OF CARD 2 FAILED TO BE LOADED IN LOCATION 004F AND THEREFORE, DID NOT REPLACE THE WAIT INSTRUCTION AT THAT LOCATION. EXAMINE CARD 2 AND TRY RELOADING. IF NO IMPROVEMENT, RUN ONE-CARD DIAGNOSTIC PROGRAMS.
30F4	0095	PROGRAM STOPPED BECAUSE OF DSW ERROR. THE ONLY VALID WORDS ARE 8003, 0003, AND 0800. DETERMINE CAUSE OF DSW ERROR AND CORRECT. RELOAD AFTER REPAIR.
30F5	0 OA 5	WHILE LOADING THE MAIN PROGRAM, PROGRAM FOUND THAT WORD COUNT IN LOCATION 0034 EQUALED ZERO. PROBLEM MAY BE CAUSED BY A BLANK CARD IN DECK, OR READING FAILURE.
30F6	0087	CHECKSUM ERROR. EITHER THE SUM OF LOCATIONS 0010 THRU 0036 DDES NOT EQUAL ZERO, OR AN ADD FAILURE HAS OCCURRED. COMPARE DATA IN LOCATIONS 0010 THRU 0036 WITH DATA IN CARD COLUMNS 1 THROUGH 78. IF CORRECT, RUN CARDS 2 THRU 5 OF ONE-CARD DIAGNOSTIC PROGRAMS TO HELP DETERMINE CAUSE OF FAILURE.
30F7	OODE	PROGRAM HAS FOUND THAT A WORD IN THE READ-IN AREA AND THE WORD AT LOCATION WHERE THE WORD READ IN WAS TRANSFERRED DO NOT AGREE. THE ADDRESSES OF THE WORDS FOUND NOT TO AGREE CAN BE FOUND AT LOCATIONS OODA AND CODC. THE PROBLEM MAY BE A DATA-TRANSFER ERROR OR AN EOR FAILURE. RUN ONE-CARD DIAGNOSTIC PROGRAMS TO DETERMINE CAUSE OF PROBLEM.

BASIC DIAGNOSTIC LOADER

### 4. PRINTOUTS (NONE)

### 5. COMMENTS

THE 1130 BASIC DIAGNOSTIC LOADER IS A SELF-CHECKING PROGRAM DESIGNED TO LOAD AND VERIFY LOADING OF CARD PROGRAMS PUNCHED IN 8-8 MODE. THE 8-8 MODE REFERS TO PROGPAM CARDS IN WHICH A CARD COLUMN CONTAINS A HALF WORD WHERE ONE FULL WORD CONSISTS OF SIXTEEN BITS. TWO CARD COLUMNS ARE REQUIRED FOR FACH WORD. THE LOADER DECK CONSISTS OF FIVE CARDS. THE FIRST CARD IS PUNCHED IN IPL-MODE FORMAT. CARDS TWO THROUGH FIVE ARE PUNCHED IN 8-8 MODE.

- BASIC-LOADER FIRST-CARD FUNCTIONS 5.1
- 5.1.1 AFTER BEING LOADED IN IPL MODE, THE FIRST-CARD PROGRAM DEVELOPS A CHECKSUM TO DETERMINE IF IT WAS LOADED CORRECTLY. IF THE CHECKSUM IS NOT 0000, THE PROGRAM STOPS AT A WAIT WITH THE DEVELOPED CHECKSUM DISPLAYED BY THE ACCUMULATOR.
- 5.1.2 IF THE CHECKSUM IS CORRECT, THE FIRST-CARD PROGRAM PROCEEDS TO LOAD CARDS TWO THROUGH FIVE. TWO CARD COLUMNS WILL FORM ONE STORAGE WORD BECAUSE THESE CARDS ARE PUNCHED IN 8-8 MIDE. THE DSW IS CHECKED, AND IF AN ERROR IS DETECTED, THE PROGRAM WILL STOP AT A WAIT WITH THE ERROR DSW DISPLAYED BY THE ACCUMULATOR. THE CONDITION CAUSING THE DSW ERROR MUST BE CORRECTED BEFORE ATTEMPTING TO RELOAD.
- 5.1.3 AFTER LOADING CARDS TWO THROUGH FIVE, THE PROGRAM BRANCHES TO BEGINNING OF PROGRAM JUST LOADED.
- 5.2 FUNCTIONS OF BASIC-LOADER CARDS TWO THROUGH FIVE
- 5.2.1 CARDS TWO THROUGH FIVE LOAD A MAIN-PROGRAM CARD INTO LOCATIONS 0010 TO 0036. THE DSW IS CHECKED AFTER READING A CARD COLUMN, AND IF AN ERROR OCCURRED, THE PROGRAM STOPS AT A WAIT WITH THE DSW ERROR DISPLAYED BY THE ACCUMULATOR.
- 5.2.2 CARDS TWO THROUGH FIVE ALSO DEVELOP CHECKSUM OF LOCATIONS 0010 THROUGH 0036. IF CHECKSUM IS OTHER THAN 0000, PROGRAM STOPS AT ERROR WAIT WITH CHECKSUM DISPLAYED BY ACCUMULATOR. A CORRECT CHECKSUM MEANS CARD WAS READ CORRECTLY.
- 5.2.3 THE WORD COUNT, (NUMBER OF WORDS ON THE CARD) IS TAKEN FROM LOCATION 0034. IF IT IS ZERO PROGRAM STOPS AT ERROR-WAIT.
- 5.2.4 THE NUMBER OF WORDS SPECIFIED IN LOCATION 0034 IS RELOCATED. STARTING AT THE ADDRESS THAT WAS SPECIFIED IN CARD COLUMNS 75 AND 76 AND THAT WAS READ INTO LOCATION 0035.
- 5.2.5. THE DATA READ AND THE DATA AT THE TRANSFERED LOCATION ARE COMPARED WORD BY WORD TO VERIFY THAT THE RELOCATION HAS BEEN DONE CORRECTLY. AN UNEQUAL COMPAPISON RESULTS IN THE PROGRAM STOPPING AT AN ENDY-WAIT INDICATING AN RELOCATION ERROR.
- 5.2.6 THE PROGRAM REPEATS THE STEPS DISCUSSED IN PARAGRAPHS 5.2.1 THROUGH 5.2.5 FOR FACH CARD OF THE MAIN PROGRAM DECK. EXCEPT FOR THE LAST CARD, WHICH MUST HAVE A LOCATION ADDRESS OF 0000. AFTER READING THE CARD AND DEVELOPING THE CHECKSUM, THE PROGRAM BRANCHES TO LOCATION 0010 AND STARTS EXECUTING THE MAIN LINE PROGRAM.

### BASIC DIAGNOSTIC LOADER

### 6. APPENDIX

### 6-1 PUNCHED CARD 8-8 FORMAT

THE ORGANIZATION OF THE PUNCHED CARD 8-8 FORMAT IS AS FOLLOWS.

- A. COLUMNS 1 THROUGH 72 CONTAIN HALF WORDS (8 BITS) PUNCHED INTO ROWS 12 THROUGH 5. WORD-BITS 0 THROUGH 7 ARE PUNCHED INTO EVEN NUMBERED COLUMNS. WORD-BITS 8 THROUGH 15 ARE PUNCHED INTO ODD NUMBERED COLUMNS.
- B. COLUMNS 73 AND 74 CONTAIN A WORD-COUNT OF THE TOTAL NUMBER OF DATA WORDS PUNCHED INTO THE CARD.
- C. COLUMNS 75 AND 76 CONTAIN THE LOCATION, IN CORE WHERE THE DATA ON THE CARD ARE TO BE LOADED.
- D. COLUMNS 77 AND 78 CONTAIN A CHECKSUN (TWO'S COMPLEMENT OF THE SUM OF ALL WORDS IN COLUMNS 1 THROUGH 76).
- F. COLUMNS 79 AND 80 CONTAIN THE CARD'S SEQUENCE NUMBER PUNCHED IN HOLLERITH/HEXADECIMAL FORMAT.

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BASIC DIAGNOSTIC LOADER LIST FOR CAPD ONE (IPL)

BASIC DIAGNOSTIC LOADER LIST FOR CARD ONE (IPL)

DATE EC NO. 01MAY66 415490C

	-		ARS			CLD00000
028C		•	DRG	/0000		CF 0500 10
		*			1	CLD00020
					LOAD BUTTON	
		*				CLD00060
0 0000	CO2C	START	LD	RDIN+1	CORRECT I/O CONT. COMM.	CLD: 0070
0001 0	1802		SRA	2	BY SHIFTING	CFD00080
0002 0	D02A		STO	RD IN+1		CLD00090
0003 0	CO23		LD	STRD	CORRECT I/O CONT. COMM.	CLD00100
0004 0	1801		SRA	1	BY SHIFTING AND	CL DC 0110
0005 0	D021		STO	STRD	STORE WORD	CL DC 0120
0006 0	F038		EOR	STORE	SET UP STORE LONG INST	CLD00130
0007 0	DC37		STO	STORE	PUT BACK INTO CORE.	CLD00140
0 8 00 0	C022		LD	SENSE	CORRECT I/O CONT. COMM.	CLD00150
0009 0	1803		SRA	3		CLDC0160
0004 0	D050		STO	SENSE		CLD00170
0.000	F010		EOR	RESET		CLD00180
00000	D01C		STO	RESET	MAKE STORE LONG THET	CLD00190
0000 0	1805		SRA	5 CTODEA1	MAKE STORE LONG INST.	CLD00200
000E 0	F031		EOR	STORE+1 STORE+1		CLD00210
0010 0	D030 C017		STO LD	INTAD		CLD00220
0010 0	DOF6		STO	/0008		CLD00240
0012 0	D0F9		STO	/000C		CLD00250
0012 (	001 9	*	3.0	70000		CLD00260
0013 0	C016	STRT	LD	CHKSM	FORM CHECK SUM , THIS CARD	CLD00270
0014 0	8000		Ā	*	FROM 0015 THRU 004D	CLD00280
0015 0	0014		STO	CHKSM		CLD00290
0016 0	COFD		LD	STRT+1		CLD00300
0017 0	800E		A	K0001	MODIFY ADD INSTRUCTION	CLD00310
0018 0	DOFB		STO	STRT+1		CLD00320
0019 0	FOOR		EOR	CON1	CHECK THAT LAST LOC.CHECKD	
001A 0	4920		BSC	2	SKIP WHEN DONE	CL000340
001B 0	70F7		MDX	STRT	GO GET NEXT WORD	CL000350
001C 0	COOD		LD	CHKSM	GET SUM OF 0013 THRU 004F	CLD00360
001D 0	482G		BSC	Z	SEE ACC IS 0000 IF SO GO	CLD00370
001E 0	30F1		WAIT	-15	CHECK SUM ERROR	CLD00380
001F 0	7010	ENDCK	MDX	SRTRD	START LOADING	CLD00390
		*				CLD00400
0020 0	8823	INT	90	/B823		CLD00410
0021 0	0806		XIO	RESET-1	SENSE AND RESET DSW	CL000420
0022 0	48F8	×0003	DC	/48F8	BOSC +-Z	CLD00430
0023 0	0803	K0803		/0803		CLD00440
0024 0	700E	_	MDX	PACK		CLD00450
0025 0	8039	CONI	A X	/0039		CLD00460
0025 0	0001	K0001		/0001	START RD, USED AS CONSTANT	CLD00470 CLD00480
0027 0	2808	STRD	DC	/2808	/1404 SET BY PROG.	CLD00490
0027 0	0050	INTAD	-	INT	RESET DSW CONTROL COMMAND	CLD00500
005a u	0003	RESET		/0003	/1703 SET BY PROGRAM	CLD00510
002A 0	3829	CHKSM		/3829	SENSE DSW CONTROL COMMAND	CLD00520
0028 0	8800	SENSE		/8800	/1700 SET BY PROGRAM	CLD00530
0020 0	0000	RDIN	DC	<b>10000</b>	READ IN LOCATIONS 0+1	CLD00540
0020 0	4800		DC	/4800	/1200 SET BY PROGRAM	CLD00550
		*				CLD00560
002E 0	F017	ERROR	EOR	K0800	RESTORE ACC. TO DSW	CLD00570
002F 0	30F2		MAIT	-14	**ERR. DSW IN ACC.	CLD00580
		*				CLD00590
0030 0	08F5	SRTRD	XIO	STRD-1	START READ	CL D00600
0031 0	08F6		XIO	RESET-1	RESET DSW	CL D00610
0032 0	0857		XIO	SENSE-1	SENSE DSW FOR CRP .	CL DC0620
0.033 0	F011	PACK	EUK	K8003	BITS 0 + 14 + 15 ONLY	CLD00630
0034 0	4820		850	Z	SKIP IF BITS 0+14+15 DNLY	CLD00640
0035 0	7011 -		MDX	CONT 1	CONTINUE DSW ANALYSIS	CLD00650
0036 0	08F5		XIC	RDIN	RD COL. ONE-HALF WORD	CL D00660
0037 0	COF4		LD	RDIN		CLD00670
0038 0	FOED		EOR	K0001	SWITCH READ IN AREA, EVEN	CLD00680
0039 0	00F2		STO	RDIN	COLS. IN O ODD IN 1	CLD00690

PROG	ID	03A3-1
DACE		1

003Å	-	4820		BSC	Z	SKIP BOTH HALVES IN	CLD00700
003B	ŋ	70F5		MDX	SR TRD+1	GET 2ND HALF WORD	CLD00710
003C	0	COC3		LD	START	GET LAST 8 BITS	CLD00720
003D	0	1808		SRA	8	SHIFT IT	CL 000 7 30
003E	0	FOC2		EOR	START+1	GET FIRST 8 BITS	CLD00740
003F	0	C004	STORE	DC	/C 00 4	FIRST WORD OF STO L	CLD00750
0040	0	00F7		DC	/00F7	2ND WORD OF STORE LONG	CLD00760
			* STO	RE + STOR	RE +1 CHANG	GED BY PROG9 TO STO L /004F	CLD00770
0041	n	COFE		LD	STORE+1		CLD00780
0.042	0	80E3		,Α	K0001	MODIFY STORE ADDRESS	CLD00790
0043	0	DOFC		STO	STORE+1		CLD00800
0044	0	70EC		MDX	SR TRD+1		CLD00810
			*				CLD00820
0045	0	8003	K8003	DC	/8003		CLD00830
0046	0	0800	K0800	DC	/0800		CLD00840
			<b>4</b> .				CLD00850
0047	0	F003	CONT 1	FOR	K8000	CHECK FOR BITS 14+15 ONLY	CFD00860
0048	0	4820		BSC	2	SKIP BUSY AND NOT READY	CLD00870
	Ō	7002		MDX	CONT2	SALL SOST HAD MOT WERE	CLD00880
004A	Ò	70E7		MDX	SRTRD+2		CLDC0890
004B	-	8000	K8000		/8000		CLD00900
	•		*		, 0000		CLD00910
0.040	0	FOD6	CONT 2	FOR	K0803	CHECK FOR BIT 4 ONLY	CL D00920
004D		4820	00.11 L	BSC	7	SKIP END OF CARD	CLD00930
004E	-	70DF		MDX	ERROR	SATE CAD BY CARD	CLD00940
004F		30F3		WAIT		*ERR IF PRGM STOPS AT WAIT	CLD00950
- "	•	20. 2	*			TERM IT THOSE STOPS AT WALL	CED00960
			* CAR	D 2 IS RI	FAD IN AT	THIS LOCATION WITH THE	CLD00970
					EAD OF 4 C		CLD00910
0050		0000	- Citt	END	START		CLD00990
0000		0000		L'10	JIANI		CEDCOSSO

BASIC DIAGNOSTIC LOADER LIST FOR CARD ONE (IPI)

### CROSS REFERENCE LISTING

SYMBOL	VALUE	REFERENCES
CHKSM	002A	0013,0015,0010
CONTI	0047	00 35
CONT 2	C04C	0049
CONI	0025	CO 19
ENDSK	001F	
ERROR	002E	00 4E
INT	0020	00 28
INTAD	0028	CO 10
KOOO1	C026	0017,0038,0042
K0800	C046	00 2E
K0803	0023	CO 4C
K8000	004B	0047
K8003	0045	00 33
PACK	0033	00 24
RDIN	002C	0000,0002,0036,00 <b>37,0039</b>
RESET	0029	0008,0000,0021,0031
SENSE	002B	0008,000A,0032
SRTRD	0030	001F,003B,0044,004A
START	0000	003C,003E,0050
STORE	003F	0006,0007,000E,000F,0041,0043
STRD	0027	0003,0005,0030
STRT	0013	0016,0018,0018
		·

BASIC DIAGNOSTIC LOADER LIST FOR CARDS TWO THROUGH FIVE

	ABS	•		CLD01000
•				
			NE CARD OF 8/8 FORMAT	CLDC1020
		. COON THRU		CL DC 1 0 30
			CKED. FOR SUM LOCS.	CLD01040
		0026 TO BE		CLDC 10 50
			SPECIFIED IN LOC. 0024	CLD01060
	* ADDRESS I		ATIONS BEGINNING AT THE E WORDS MOVED ARE CHECKED	CLD01070
			0000 AND FOLLOWING.	CLD01080
			THE NEXT CARD IS READ.	CLD01090 CLD01100
	* CARD 2 BE		THE NEXT CAPO IS READ!	CLDC 1110
	*	01.10 112.12		CLD01120
02BC	ORG	/004F		CLD01130
004F 0 C020	LD	COUNT	COUNT CARDS READ	CLD01140
0050 0 8020	RSTRT A	K0001		CLD01150
0051 0 DO1E	STO	COUNT		CL DO 1160
0052 0 F01F	EOR	K0004	CHECK FOR 4 CARDS READ	CLD01170
0053 0 4820	BSC	Z	SKIP 4 CARDS READ	CLD01180
CO54 0 70DB	MDX	/0030	GO TO START READ	CLD01190
	*			CL 001200
0055 0 C071	LD	MDX	SET RESART BRANCH	CLD01210
0056 0 D0F9	STO	RSTRT		CLD01220
0057 0 CO70	LD	MD XO	•	CLD^1222
0058 0 D0A7	STO	/0000		CLD01224 CLD01230
0059 0 0034	LOAD LD	CON1		CLD01240
0054 0 D01D	STO	STORE	RESTORE STORE INST.	CLD01250
005B 0 C022	LD	CON2	ACSTURE STORE INSTA	CLD1260
005C 0 D027	STO	RDIN	RESTORE PDIN LOC.	CLD01270
005D 0 C022	LD	INTAD		CLD01280
005E 0 D0A9	STO	/0008		CLD01290
005F 0 DOAC	STO	<b>7000C</b>		CLD01300
	*			CLD01310
0060 0 081D	SRTRD XIO	STRD-1	START READ	CLD01320
0061 0 081E	OIX	RESET-1	RESET DSW	CLDC1330
0062 0 081F	XIO	SENSE-1	SENSE DSW	CLD01340
	*			CLD01350
0063 0 F027	PACK EOR	K8003	CHECK BITS 0, 14+15 ONLY	CLD01360
0064 U 4820 0065 O 7031	BSC	Z	SKIP IF COL. REQUEST	CLD01370
0065 0 7031 0066 0 081D	MDX XIO	CONT1	DEAD A COLUMN	CLD01380
0067 0 CO1C	LD	RDIN RDIN	READ A COLUMN SET NEXT READ IN LOCATION	CLD01390 CLD01400
0068 0 F008	EOR	K0001	SET MENT READ IN LOCATION	CLD01410
0069 0 DO1A	STO	RDIN		CLD01420
006A 0 F013	EOR	CON2		CLD01430
006B 0 4820	BSC	Z	SKIP IF BOTH HALF WORDS IN	CLD01440
006C 0 70F4	MDX	SRTRD+1		CLD01450
006D 0 C018	LD	RDEVN	COMBINE HALF WORDS	CLD01460
006E 0 1808	SRA	8		CLD01470
006F 0 7007	MDX	/0077		CLD01490
0070 0 0000	COUNT DC	/0000		CLD01500
0071 0 0001	K0001 DC	/0001		CLD01510
0072 0 0004	K0004 DC	/0004		CL DO 1520
	* ****			CL DO 1540
	* CARD 3 B	EGINS HERE	•	CLD01550
0073	ORG	/0077		CLD01560 CLD01570
0077 0 F00F	EOR	ROODD		CLD01571
0078 0 D097	STORE STO	/0010	STORE FULL WORD	CLD01580
0079 0 COFE	LD	STORE	SET NEXT WORD LOCATION	CLD01590
007A 0 80F6	A	K0001	CL > NEXT NO 10 EUGHTE ON	CLD01600
007B 0 DOFC	STO	STORE		CLD01610
007C 0 70E4	MDX	SRTRD+1		CLD01620
007D 0 7096	HOP MDX	/0014	START PROGRAM	CLD01630
007E 0 0086	CON2 DC	RDEVN	READ CARD CONTROL COMMAND	CL DO 1650
007F 0 1404	STRD DC	/1404		CLDO 1660
0080 0 008F	INTAD DC	INT	RESET DSW CONTROL COMMAND	CLD01670
0090 0 0001				

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BASIC DIAGNOSTIC LOADER LIST FOR CARDS TWO THROUGH FIVE

							•	
0001	_	1703	RESET	DC.		/1703		CLD01680
0081			CKSUM			/0000	SENSE DSW CONTROL COMMAND	CLD01690
0082		0000					SENSE DSW CONTROL CONTRACT	CLD01700
0083		1700	SENSE			/1700	DEAD COL CONTROL COMMAND	CLDC1710
0084		0096		DC		PDEVN	READ COL. CONTROL COMMAND	
0085		1200		DC		/1200		CLD01720
0086	-	იღიღ	RDEVN			/0000		CLD01730
0087		0000	RDODD	DC		/0000		CLD01740
0038	0	0034	K0034	DC		/0034		CLD01750
0089	0	0037	K0037	DC		/0037		CLDC1760
0084	^	080n	K0890	DC		/0800	•	CLDC1770
003B	0	8003	.K8003	DC		/8003		CLD01780
COBC	0	0010	K0010	DC		/0010		CL001790
0080	0	8200	K8000	DC		/8000		CLDC1800
008E		D097	CONI		X	/0010-ST0	DRE-1	CLD01805
	•		*					CLDC1810
008F	n	0000	INT	DC		0		CLD01820
0090		OREF	•	XIO		PESET-1	SENSE AND RESET DSW	CLD01830
0091		4878		BOSC		+-Z	BR OUT OF INTERRUPT	CLD01840
		0803	K0803			/0803	DK GOT & TATEMOTT	CLD01850
0092			KUGUJ	MDX		PACK		CLD01860
0093	C	70C F	•	HUA		PACK		CLDC1870
	_		*			W0000	DESTRUCT ACC TO DELL	CLDC1880
0094		FOF5	ERROR			K0800	RESTORE ACC TO DSW	
0095		30F4		WAIT		-	**ERR. DSW IN ACC.	CLD01890
0096		7002		MDX		LOAD	PRESS START TO RETRY	CLD01900
0097		FOF5	CONT 1			K8000	CHECK FOR BITS 14+15 ONLY	CLD01910
0098	Ú	4820		BSC		Z	SKIP BUSY AND NOT READY	CLD01920
0099	0	7005		MDX		CONT 2		CLDC1930
009A	0	7907		MDX		SRTRD+2		CLD01940
			*					CLD01950
			* CARE	) 4 BE	GIN	S HERE		CLD01960
			*					CLD01970
009B				ORG		/009F		CLDC1980
009F	0	FOF 2	CONT 2	EOR		K0803	CHECK FOR BIT 4 ONLY	CLD01990
	^	4820		BSC		Z	SKIP END OF CARD	CLDC 20 00
00A0	1)						SKIP END OF CARD	
0040		70F2		MDX		ERROR	SKIP END OF CARD	CLD02010
			*				SKIP END OF CARD	CLD02010 CLD02020
			* *Ci	MDX	OR	ERROR	NT OF ZERO	
			* *CI	MDX	OR	ERROR		CLD02020
0041	0	70F2	_	MDX	OR	ERROR		CLD02020 CLD02030
00A1 00A2	0	70F2 C091	_	MDX HECK F	OR	ERROR	NT OF ZERO	CLD02020 CLD02030 CLD02040
00A1 00A2 00A3	0 0 0	70F2 C091 4820	_	MDX HECK F LD	OR	ERROR WORD COUL /0034	NT OF ZEROGET WORD COUNT	CLD02020 CLD02030 CLD02040 CLD02050
00A1 00A2 00A3 00A4	0 0 0	70F2 C091 4820 7002	_	MDX HECK F LD BSC MDX	OR	ERROR WORD COUL /0034 Z SUM1	NT OF ZEROGET WORD COUNT	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060
00A1 00A2 00A3 00A4 00A5	0 0 0 0	70F2 C091 4820 7002 30F5	_	MDX HECK F LD BSC MDX WAIT	°OR	ERROR WORD COUL /0034 Z SUM1 -11	NT OF ZEROGET WORD COUNT SKIP IF WORD COUNT ZERO	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070
00A1 00A2 00A3 00A4	0 0 0 0	70F2 C091 4820 7002	_	MDX HECK F LD BSC MDX	-OR	ERROR WORD COUL /0034 Z SUM1	NT OF ZEROGET WORD COUNT SKIP IF WORD COUNT ZERO **ERR. WORD COUNT IS ZERO	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080
00A1 00A2 00A3 00A4 00A5	0 0 0 0	70F2 C091 4820 7002 30F5	*	MDX HECK F BSC MDX WAIT MDX		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD	GET WORD COUNT SKIP IF WORD COUNT ZERO **ERR. WORD COUNT IS ZERO START CONTINUES LOADING	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02090 CLD02100
00A1 00A2 00A3 00A4 00A5	0 0 0 0	70F2 C091 4820 7002 30F5	*	MDX HECK F BSC MDX WAIT MDX		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD	NT OF ZEROGET WORD COUNT SKIP IF WORD COUNT ZERO **ERR. WORD COUNT IS ZERO	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02090 CLD02100
00A1 00A2 00A3 00A4 00A5 00A6	0 0 0 0 0	70F2 C091 4820 7002 30F5 70B2	* * * * * * *	MDX HECK F BSC MDX WAIT MDX -FORM		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM D	OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. *00-26	CLD02020 CLD02030 CLD02040 CLD02050 CLD02070 CLD02070 CLD02080 CLD02090 CLD02100 CLD02110 CLD02120
00A1 00A2 00A3 00A4 00A5 00A6	0 0 0 0 0	70F2 C091 4820 7002 30F5 70B2 C0E4	*	MDX HECK F LD BSC MDX WAIT MDX -FORM LD		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM D K0010	GET WORD COUNT SKIP IF WORD COUNT ZERO **ERR. WORD COUNT IS ZERO START CONTINUES LOADING	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02090 CLD02100 CLD02110 CLD02120 CLD02130
00A1 00A2 00A3 00A4 00A5 00A6	0 0 0 0 0 0 0 0 0	70F2  C091 4820 7002 30F5 70B2  C0E4 D004	* * * * * * *	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM O KOO10 CKLOD+1	OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. *00-26	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02090 CLD02110 CLD02110 CLD02120 CLD02130 CLD02130 CLD02140
00A1 00A2 00A3 00A4 00A5 00A6	0 00000 000	70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810	* * * * * * *	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM O K0010 CKLOD+1 16	OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. *00-26	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02090 CLD02110 CLD02110 CLD02120 CLD02130 CLD02130 CLD02130 CLD02150
00A1 00A2 00A3 00A4 00A5 00A6	0 00000 0000	70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007	* * * * * * *	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO		ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM D K0010 CKLOD+1 16 CKSUM	OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. *00-26	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02090 CLD02100 CLD02110 CLD02120 CLD02120 CLD02130 CLD02140 CLD02150 CLD02150 CLD02160
00A1 00A2 00A3 00A4 00A5 00A6	0 0000 0000	70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007 C0D6	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO STA STO LD	CHI	ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM D K0010 CKLOD+1 16 CKSUM CKSUM	SET ACC. TO /0010	CLD02020 CLD02030 CLD02040 CLD02060 CLD02060 CLD02070 CLD02090 CLD02100 CLD02110 CLD02120 CLD02130 CLD02130 CLD02140 CLD02150 CLD02160 CLD02170
00A1 00A2 00A3 00A4 00A5 00A6	0 0000 00000	70F2  C091 4820 7002 30F5 70B2  C0E4 D004 1810 D007 C0D6 8400FFFF	* * * * * * * * * * * * * * * * * * * *	MDX HECK F LD BSC HDX WAIT MDX -FORM LD STO SRA STO LD A		WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF	OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. *00-26	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02070 CLD02100 CLD02110 CLD02110 CLD02130 CLD02130 CLD02140 CLD02150 CLD02160 CLD02170 CLD02160 CLD02170
00A1 00A2 00A3 00A4 00A5 00A6 00A6 00AB 00AB 00AC	0 0000 000000	70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A STO	CHI	FRROR WORD COUI  /0034 Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM	MT OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02070 CLD02100 CLD02110 CLD02120 CLD02130 CLD02140 CLD02150 CLD02160 CLD02160 CLD02160 CLD02170 CLD02160 CLD02170
00A1 00A2 00A3 00A4 00A5 00A6 00A8 00A9 00AA 00AB		70F2  C091 4820 7002 30F5 70B2  C0E4 D004 1810 D007 C0D6 8400FFFF D003 C0FD	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A STO LD	CHI	FRROR WORD COUNTY  /0034 Z SUM1 -11 LOAD  ECK SUM O  KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKSUM CKLOD+1	SET ACC. TO /0010	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02100 CLD02110 CLD02120 CLD02130 CLD02130 CLD02160 CLD02160 CLD02160 CLD02160 CLD02160 CLD02180 CLD02180 CLD02180 CLD02190
00A1 00A2 00A3 00A4 00A5 00A6 00A8 00A9 00AB 00AC 00AF 00AF		70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3 C0FD 80C0	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A LD A	CHI	FRROR WORD COUI  /0034 Z SUM1 -11 LOAD  ECK SUM O  K0010 CKLOD+1 16 CKSUM /FFF CKSUM /FFFF CKSUM CKLOD+1 K0001	MT OF ZERO  GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02110 CLD02110 CLD02120 CLD02130 CLD02130 CLD02150 CLD02170 CLD02170 CLD02170 CLD02170 CLD02190 CLD02190 CLD0210
00A1 00A2 00A3 00A4 00A5 00A6 00A8 00A9 00AA 00AB		70F2  C091 4820 7002 30F5 70B2  C0E4 D004 1810 D007 C0D6 8400FFFF D003 C0FD	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A STO LD A STO	CHI	ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM O KOO10 CKLOD+1 16 CKSUM /FFFF CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02080 CLD02090 CLD02110 CLD02120 CLD02120 CLD02130 CLD02130 CLD02150 CLD02160 CLD02170 CLD02180 CLD02180 CLD02180 CLD02190 CLD02190 CLD02200 CLD02210
00A1 00A2 00A3 00A4 00A5 00A6 00A9 00AA 00AB 00AC 00AE 00AB 00B0 00B1		70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 D0D7 C0D6 8400FFF D0D3 C0FD 80C0 D0FB F0D6	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A STO LD A STO EOR	CHI	ERROR WORD COUNTY  /0034 Z SUM1 -11 LOAD ECK SUM D  KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO01 CKLOD+1 KOO01 CKLOD+1	SET ACC. TO /OOLO  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02090 CLD02110 CLD02110 CLD02120 CLD02130 CLD02130 CLD02150 CLD02150 CLD02160 CLD02170 CLD02180 CLD02190 CLD02210 CLD02210 CLD02210 CLD02210 CLD02210
00A1 00A2 00A3 00A4 00A5 00A6 00A8 00A9 00AA 00AE 00AF 00B1 00B1		70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007 C0D6 8400FFFF 0003 C0FD 80C0 00FB F006 4820	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A STO LD A STO LD A STO LD A STO LD BSC	CHI	FRROR WORD COUNTY  /0034 Z SUM1 -11 LOAD  ECK SUM D  KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO037 Z	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02090 CLD02100 CLD02110 CLD02120 CLD02130 CLD02130 CLD02140 CLD02150 CLD02170 CLD02160 CLD02170 CLD02160 CLD02120 CLD02120 CLD02220 CLD02230 CLD02220 CLD022240
00A1 00A2 00A3 00A4 00A5 00A6 00A9 00AA 00AB 00AC 00AE 00AB 00B0 00B1		70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 D0D7 C0D6 8400FFF D0D3 C0FD 80C0 D0FB F0D6	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO STO LD A STO	CHI	ERROR  WORD COUI  /0034  Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 K0001 CKLOD+1 K00037 2 CKLOD-1	SET MORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. '00-26 SET ACC. TO /0010  FORM SUM OF LOCS. 10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED	CLD02020 CLD02030 CLD02040 CLD02060 CLD02060 CLD02070 CLD02100 CLD021100 CLD021100 CLD02120 CLD02130 CLD02150 CLD02170 CLD02160 CLD02170 CLD02180 CLD02190 CLD02200 CLD02220 CLD02230 CLD02230 CLD02230 CLD02230 CLD02230 CLD02250
00A1 00A2 00A3 00A4 00A5 00A6 00A8 00A9 00AA 00AE 00AF 00B1 00B1		70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007 C0D6 8400FFFF 0003 C0FD 80C0 00FB F006 4820	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO SRA STO LD A STO LD A STO LD A STO LD A STO LD BSC	CHI	FRROR WORD COUNTY  /0034 Z SUM1 -11 LOAD  ECK SUM D  KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO037 Z	GET WORD COUNT SKIP IF WORD COUNT ZERO **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. '00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36	CLD02020 CLD02030 CLD02030 CLD02050 CLD02060 CLD02070 CLD02080 CLD02110 CLD02110 CLD02130 CLD02130 CLD02130 CLD02160 CLD02160 CLD02170 CLD02180 CLD02180 CLD02190 CLD02200 CLD02200 CLD02200 CLD02200 CLD02250 CLD02240 CLD02260
00A1 00A2 00A3 00A4 00A5 00A6 00A6 00AB 00AC 00AF 00B0 00B1 00B3		70F2  C091 4820 7002 30F5 70B2  C0E4 0004 1810 0007 C0D6 8400FFF D0D3 C0FD 80C0 00FB F006 4820 70F6	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO STO LD A STO	CHI	ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM O KOO10 CKLOD+1 16 CKSUM /FFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO037 Z CKLOD-1 CKSUM Z	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02080 CLD02190 CLD02110 CLD02120 CLD02130 CLD02130 CLD02170 CLD02160 CLD02170 CLD02190 CLD02190 CLD02200 CLD02200 CLD02200 CLD02230 CLD02230 CLD02250 CLD02250 CLD02250 CLD02250 CLD02250
00A1 00A2 00A3 00A4 00A5 00A6 00A6 00AB 00AC 00AF 00B0 00B1 00B3 00B4 00B4		70F2  C091 4820 7002 39F5 70B2  C0E4 D004 1810 D007 C0D6 8400FFFF D003 C0FD 80C0 D0FB F0D6 4820 70F6 C0CC	* * * * SUM1	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO STO LD A LD LD LD A LD	CHI	ERROR WORD COUI  /0034 Z SUM1 -11 LOAD ECK SUM O KOO10 CKLOD+1 16 CKSUM /FFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO037 Z CKLOD-1 CKSUM Z	GET WORD COUNT SKIP IF WORD COUNT ZERO **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS. '00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02090 CLD02110 CLD02120 CLD02130 CLD02130 CLD02130 CLD02130 CLD02150 CLD02150 CLD02160 CLD02160 CLD02190 CLD02190 CLD02200 CLD02200 CLD02200 CLD02230 CLD02250 CLD02256 CLD02260 CLD02270 CLD02280
00A1 00A2 00A3 00A4 00A5 00A6 00A9 00AA 00AE 00AF 00B0 00B1 00B2 00B3		70F2  C091 4820 7002 30F5 7082  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3 C0FD 80C0 D0FB F00% 4820 70F6 C0CC 4820	* * * * SUM1  CKLOD	MDX HECK F LD BSC MDX WAIT MDX -FORM LD STO STO LD A STO LD A STO LD BSC MDX LD BSC WAIT	СНI 1.	FRROR WORD COUNTY  /0034 Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 K0001 CKLOD+1 K00037 Z CKLOD-1 CKSUM Z -10	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM	CLD0 20 20 CLD0 20 30 CLD0 20 40 CLD0 20 60 CLD0 20 60 CLD0 20 70 CLD0 20 90 CLD0 21 10 CLD0 21 20 CLD0 21 30 CLD0 21 30 CLD0 21 40 CLD0 21 50 CLD0 21 60 CLD0 21 70 CLD0 21 90 CLD0 22 10 CLD0 22 10 CLD0 22 20 CLD0 22 20 CLD0 22 30 CLD0 22 50 CLD0 22 50 CLD0 22 70 CLD0 22 90 CLD0 22 90
00A1 00A2 00A3 00A4 00A5 00A6 00A9 00AA 00AE 00AF 00B0 00B1 00B2 00B3		70F2  C091 4820 7002 30F5 7082  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3 C0FD 80C0 D0FB F00% 4820 70F6 C0CC 4820	* * * * SUM1  CKLOD	MDX HECK F BSC MDX WAIT MDX -FORM LD STO STO LA STO LA STO LA STO LD A STO LD BSC WAIT E CARI	1.	ERROR  WORD COUI  /0034  Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 K0001 CKLOD+1 K00037 2 CKLOD-1 CKSUM Z -10  MAGE TO T	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM  HE LOCS. BEGINING AT	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02090 CLD02110 CLD02120 CLD02130 CLD02130 CLD02140 CLD02150 CLD02140 CLD02170 CLD02150 CLD02120 CLD02230 CLD02230 CLD02230 CLD02250 CLD02250 CLD02260 CLD02250 CLD02260 CLD02270 CLD02280 CLD02280 CLD02280 CLD02280 CLD02280 CLD022300
00A1 00A2 00A3 00A4 00A5 00A6 00A9 00AA 00AE 00AF 00B0 00B1 00B2 00B3		70F2  C091 4820 7002 30F5 7082  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3 C0FD 80C0 D0FB F00% 4820 70F6 C0CC 4820	* * * * SUM1  CKLOD	MDX HECK F BSC MDX WAIT MDX -FORM LD STO STO LA STO LA STO LA STO LD A STO LD BSC WAIT E CARI	1.	ERROR  WORD COUI  /0034  Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 K0001 CKLOD+1 K00037 2 CKLOD-1 CKSUM Z -10  MAGE TO T	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM	CLD020 20 CLD020 30 CLD020 40 CLD020 50 CLD020 60 CLD020 70 CLD020 90 CLD021 10 CLD021 20 CLD021 30 CLD021 50 CLD021 60 CLD021 70 CLD021 70 CLD021 80 CLD021 90 CLD022 0 CLD022 0 CLD022 50 CLD022 70 CLD022 80 CLD022 50 CLD022 50 CLD022 50 CLD022 50 CLD022 70 CLD022 80 CLD022 90 CLD02 3 10
00A1 00A2 00A3 00A4 00A5 00A6 00A9 00AA 00AE 00AF 00B0 00B1 00B2 00B3		70F2  C091 4820 7002 30F5 7082  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3 C0FD 80C0 D0FB F00% 4820 70F6 C0CC 4820	* * * * SUM1  CKLOD	MDX HECK F BSC MDX WAIT MDX -FORM LD STO STO LA STO LA STO LA STO LD A STO LD BSC WAIT E CARI	1.	ERROR  WORD COUI  /0034  Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 K0001 CKLOD+1 K00037 2 CKLOD-1 CKSUM Z -10  MAGE TO T	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM  HE LOCS. BEGINING AT LOC. /0025.	CLD02020 CLD02030 CLD02050 CLD02050 CLD02070 CLD02070 CLD02090 CLD02110 CLD02120 CLD02130 CLD02160 CLD02160 CLD02160 CLD02170 CLD02180 CLD02180 CLD02190 CLD02200 CLD02200 CLD02200 CLD02200 CLD02200 CLD02250 CLD02270 CLD02300 CLD02310 CLD02320
00A1 00A2 00A3 00A4 00A5 00A6 00A6 00A6 00AF 00B0 00B1 00B2 00B3 00B4 00B5 00B4		70F2  C091 4820 7002 30F5 7082  C0E4 0004 1810 0007 C0D6 8400FFFF D0D3 C0FD 80C0 D0FB F00% 4820 70F6 C0CC 4820	* * * * * * * * * * * * * * * * * * *	MDX HECK F BSC MDX WAIT MDX -FORM LD STO STO LA STO LA STO LA STO LD A STO LD BSC WAIT E CARI	1.	ERROR  WORD COUI  /0034  Z SUM1 -11 LOAD  ECK SUM D  K0010 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 K0001 CKLOD+1 K00037 2 CKLOD-1 CKSUM Z -10  MAGE TO T	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*00-26  SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM  HE LOCS. BEGINING AT LOC. /0025	CLD02020 CLD02030 CLD02040 CLD02050 CLD02060 CLD02070 CLD02090 CLD02110 CLD02120 CLD02130 CLD02130 CLD02130 CLD02130 CLD02130 CLD02160 CLD02170 CLD02180 CLD02190 CLD02200 CLD02200 CLD02200 CLD02220 CLD02230 CLD02250 CLD02250 CLD02250 CLD02250 CLD02230 CLD02250 CLD02230 CLD02270 CLD02230 CLD02230 CLD02230 CLD02230 CLD02230 CLD02230 CLD02330
00A1 00A2 00A3 00A4 00A5 00A6 00A6 00A6 00AF 00B0 00B1 00B2 00B3 00B4 00B5 00B4		70F2  C091 4820 7002 39F5 70B2  C0E4 D004 1810 D007 C0D6 8400FFFF D003 C0FD 80C0 D0FB F00B 4820 70F6 C0CC 4820 30F6	* * * SUM1  CKLOD  * * MOV * THE	HECK F LD BSC MDX WAIT MDX -FORM LD STO STO LD A	CHI 1.	FRROR  WORD COUNTY  /0034  Z SUM1 -11 LOAD  ECK SUM O  KO010 CKLOD+1 16 CKSUM CKSUM CKSUM CKSUM CKLOD+1 KO001 CKLOD+1 KO0037 Z CKLOD-1 CKSUM Z -10  MAGE TO T GIVEN IN	GET WORD COUNT SKIP IF WORD COUNT ZERO  **ERR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.'00-26 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM  HE LOCS. BEGINING AT LOC. /0025.	CLD02020 CLD02030 CLD02050 CLD02050 CLD02070 CLD02070 CLD02090 CLD02110 CLD02120 CLD02130 CLD02160 CLD02160 CLD02160 CLD02170 CLD02180 CLD02180 CLD02190 CLD02200 CLD02200 CLD02200 CLD02200 CLD02200 CLD02250 CLD02270 CLD02300 CLD02310 CLD02320

BASIC DIAGNOSTIC LOADER LIST FOR CARDS TWO THROUGH FIVE

0088	^	7001		MDX		STRE		CLD02350
OOBC		7001		XGM		HGP	START PROGRAM VIA HOP	CLDC 2360
00BC		DOOC	STRE	STO		PUT+1	SET FIRST WORD ADDRESS	CL D0 2370
OOBE		COCD	3116	LD		K0010	SET ACC. EQU. 0010	CL D0 23 80
OOBF		D001		STO		GET+1	SET TO GET FIRST WORD AT O	CLD02390
0000		C400FFFF	GE T	LD	L	/FFFF	GET PROG. WORD	CLD02400
00C2		7006	OL 1	MDX	•	PUT	OET TROOP WORD	CLD02410
0002	U	7000	*	HUA		, , ,		CLD02420
				1 5 RI	EG IN	NS HERE		CLDC 2430
			*	, , ,,	. 011	13 11111		CLD02440
00C3			•	ORG		/00C7		CLDC 2450
0007	^	7008	MDX	MDX	x	LOAD-R ST	DT-1	CL DC 2456
0007		7013	MDXO	MDX	x	/0013		CLD02457
0009		D400FFFF	PUT	STO	î	/FFFF	PUT PROG. WORD	CL D0 2460
00CB		COFE	PU1	LD	_	PUT+1	MODIFY PUT	CLD02470
		80A4		A		K0001	PODITI TO	CLDC248C
0000		DOFC		STO		PUT+1		CLD02490
0000		COF2		LD		GET+1	MODIFY GET	CLDC2500
00CE		80A1		A		K0001	HUDITT GET	CLD02510
00CF				STO		GET+1		CLDC 25 20
0000		DOF0		EOR		K0034	CHECK FOR ALL WORDS MOVED	CLD02530
0001		FOB6		BSC		7	SKIP ALL WORDS MOVED	CLDC 2540
00D2		4820		MDX		GET	SKIP ALL WORDS POYED	CLD02550
0 0D 3		70EC	CHMO	LD	Ł	/0035	GET ADDRESS OF FIRST WORD	CLD02560
		C4000035	SUM2		L	CKMOV+1	PUT IT INTO ROUTINE	CLD02570
0006		D003		STO			SET TO GET FIRST WORD OF	CLD02580
0007	_	C084		LD		K0010 C0MP+1	I MA GE	CLD02590
0008		D003	C++ MO++	STO		/FFFF	GET WORD MOVED	CLD02600
		C400FFFF	CKMOV		L	/FFFF	COMPARE WITH CARD IMAGE	CLD02610
		F400FFFF	COMP	EOR	L	•	SKIP WORD STORED OK	CLD02620
OODD		4820		BSC		2	**ERR. WORD NOT STORED OK.	CLD02630
OODE		30F7		WAIT		-9 5×M0V+1	MODIFY FOR NEXT WORD	CLD02640
OODF		COFA		LD		CKMOV+1	MUDIFY FUR NEXT WORD	CLD02650
00E0		8090		A		K0001		CLD02650
00E1		DOF8		STO		CKMOV+1	MODIFY FOR NEXT COMPARE	CLD02670
0062	_	COF9		LD		CDMP+1	MUDIFY FUR NEXT CUMPARE	CLD02680
00E3		808D		A		K0001		CLD02690
00E4		DOF7		STO		COMP+1	CHECK TE ALL DONE	CLD02700
00E5		FOA2		EOR		K0034	CHECK IF ALL DONE	
00E6		4820		BSC		7	SKIP ALL WORDS CHECKED	CL DO 2710 CL DO 2720
00E7		70F1		MDX		CKMOV	CO CET NEVT CARD	CLD02730
00E8		70BD		MDX		SUM1-1	GO GET NEXT CARD	CLD02750
OOEA		0059		END		LOAD		CLUCZIAC

### BASIC DIAGNOSTIC LOADER LIST FOR CARDS TWO THROUGH FIVE

### CROSS REFERENCE LISTING

SYMBOL	VALUE	RE FERENCES
CKLOD	ODAC	CCA8,00AF,00B1,00B4
CKMOV	0009	00 D6,0 QDF,00E1,0 OE7
CKSUM	0082	00AA,0CAB,00AE,00B5
COMP	OODB	00 D8,0 CE 2,00E4
CONT1	0097	00 65
CONT2	009F	00 99
CONI	008E	00 59
CONZ	007E	00 5B , 0 C6A
COUNT	2070	CO4F,0051
ERROR	0094	00 A1
GET	0000	C^BF,00CE,00D0,00D3
HOP	007D	On BC
INT	COSE	00 80
INTAD	080	0º 50
KOOOl	0071	00 50,0068,007A,00B0,00CC,00CF,00E0,00E3
K0004	0072	00 52
K0010	008 C	00A7,0CBE,00D7
K0034	00A8	00 D1 • 0 0E 5
K0037	0089	0n B2
K0800	A800	00 94
KORO3	0092	00 9F
K8000	.008D	00 97
K8003	0085	00 63
LOAD	0059	00 96,0 CA6,00C7,00E9
4DX	0007	00 55
MDXO	0008	00 57
MUVE	0088	
PACK	0063	00 93
PUT	0009	00BD,00C2,00CB,00CD
RDEVN	096	006D,007E,0084
RDIN	C084	00.50,0066,0067,0069
RDODD	0087	00 77
RESET	0081	0061,0090
RSTRT	0050	00 56, 00C7
SENSE	0083	00 62
SRTRD	0060	006C,007C,009A
STORE	0078	005A,0079,007B,008E
STRD	007F	00 60
STRE	OOBD	OC 88
SUMI	00A7	00A4,00E8
SUM2	00D4	

BASIC DIAGNOSTIC LOADER PAPER TAPE BASIC LOADER

			ABS				TDLCOOOO
02BC			ORG		იისი		TDL00010
		* L				LOAD BUTTON	TDL00020
0000 0	7011		MDX	S	TRT		TDL00030
0001 0	0000		DC				TDLCCC4C
0002 0	0000		DC				TDLCCO 50
0003 0	0000		DC				TDL00060
0004 0	0000		DC				TDL00070
0005 0	0000		DC				10100080
0006 0	0000		DC				TDL00090
0007 0	0000 0000		DC DC				TDLC0100
0009 0	0000		DC				10LC0120
0004 O	0000		DC				TDL00130
000B 0	0000		DC				TDLC014C
0 0000	003A		DC	1	NT		TDLCC15C
000D 0	0000		DC	-			TDLC0160
000E 0	0000		DC				TDL00170
000F 0	0000		DC				TDL00180
0010 0	0000		DC				TDL00190
0011 0	റാാാ		DC				TDLCOZOC
		*					TDLC0210
0012 0	COOD	STRT	!.D	c	HKSM	FORM CHECK SUM	TDLC022C
0013 0	84000000		A	L /	0000		TDL00230
0015 0	D00 A		STO		HKSM		TDL00240
0016 0	COFD		LD		TRT+2		TDLC025C
0017 0	8064		A		0001	MODIFY ADD INSTRUCTION	TDLC0260
0018 0	DOFB		STO		TRT+2		TDLC0270
0019 0	F007		EOR		AST	CHECK THAT LAST LOC.CHECKD	
001A 0	4820		BSC	Z		SKIP WHEN DONE	TDLC0290
0018 0	70F6		MDX		TRT	GD GET NEXT WORD GET SUM DE 0000 THRU COE8	TDLC0300
001C 0	C003		LD		HKSM	GET SUM OF 0000 THRU COEB SKIP IF CKSUM ZERO	TDL00310
0015 C	4820 30F1		BSC WAIT	Z	15	CKSUM ERROR	TDL00330
001F 0	7030		MDX		.DAD	START LOADING	TDL00340
0020 0				•		START EURDING	DECOSA
		LUKCH	חר	,	TINEL		T0100350
	2D6E	CHKSM			2D6E		TDL00350
0021 0	00E9	CHKSM LAST	DC DC		ND		TDL00360
0021 0	00E9	LAST	DC	E	ND		
		LAST		E			TDL00360 TDL00380
0021 0 0022 0	00E9 FFFF	LAST	DC DC	E	ND		TDL00360 TDL00380 TDL00400
0021 0 0022 0 0023 0	09E9 FFFF 0000	LAST	DC DC	E	ND		TDL00360 TDL00380 TDL00400 TDL00401
0021 0 0022 0 0023 0 0024 0	00E9 FFFF 0000 0000	LAST	DC DC DC	E	ND		TDL00360 TDL00380 TDL00400 TDL00401 TDL00402
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0	00E9 FFFF 0000 0000 0000	LAST	DC DC DC DC DC DC	E	ND		TDL00360 TDL00380 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0	09E9 FFFF 0000 0000 0000 0000 0000	LAST	DC DC DC DC DC DC	E	ND		TDL00360 TDL00380 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC DC DC DC DC DC	E	ND		TDL00360 TDL00400 TDL00401 TDL00402 TDL00410 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC DC DC DC DC DC DC DC	E	ND		TDL00360 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00430 TDL00450 TDL00450 TDL00460
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC	E	ND		TDL00360 TDL00400 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00470
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0028 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC	E	ND		TDL00360 TDL00400 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00440 TDL00460 TDL00460 TDL00460 TDL00480
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC	E	ND		TDL00360 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00460 TDL00470 TDL00480 TDL00490
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00400 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00470 TDL00480 TDL00490 TDL00490
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0	FFFF 0000 0000 0000 0000 0000 0000 000	LAST	DC D	E	ND		TDL00360 TDL00400 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00450 TDL00460 TDL00460 TDL00460 TDL00460 TDL00460 TDL00460 TDL00470 TDL00470 TDL00450 TDL00450
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 002C 0 002C 0 002C 0 002F 0 002F 0	FFFF 0000 0000 0000 0000 0000 0000 000	LAST	DC D	E	ND		TDL00360 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00470 TDL00480 TDL00480 TDL00480 TDL00480 TDL00480 TDL00480 TDL00480 TDL00480 TDL00480
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0020 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00401 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00450 TDL00450 TDL00460 TDL00460 TDL00490 TDL00510 TDL00510 TDL00530
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0025 0 0027 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00401 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00440 TDL00460 TDL00460 TDL00460 TDL00460 TDL00460 TDL004500 TDL00500 TDL00520 TDL00540
0021 0 0022 0 0023 0 0024 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0020 0 0020 0 0020 0 0020 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00401 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00450 TDL00450 TDL00460 TDL00460 TDL00490 TDL00510 TDL00510 TDL00530
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0020 0 0020 0 0021 0 0031 0 0031 0 0031 0 0033 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00460 TDL00470 TDL00470 TDL00510 TDL00520 TDL00520 TDL00550 TDL00550
0021 0 0022 0 0023 0 0024 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0020 0 0020 0 0020 0 0020 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00400 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00460 TDL00510 TDL00520 TDL00530 TDL00550 TDL00550 TDL00550 TDL00550 TDL00560
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0020 0 0031 0 0031 0 0031 0 0032 0 0031 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00400 TDL00400 TDL00400 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00470 TDL00480 TDL00480 TDL00500 TDL00510 TDL00520 TDL00540 TDL00550 TDL00550 TDL00550 TDL00550 TDL00560 TDL00570
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 002E 0 002E 0 0031 0 0031 0 0032 0 0031 0 0032 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00450 TDL00450 TDL00460 TDL00460 TDL00460 TDL00510 TDL00510 TDL00540 TDL00550 TDL00550 TDL00570 TDL00570 TDL00570 TDL00570
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0031 0 0031 0 0031 0 0031 0 0033 0 0034 0 0035 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC D	E	ND		TDL00360 TDL00401 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00460 TDL00510 TDL00510 TDL00520 TDL00550 TDL00550 TDL00570 TDL00570 TDL00570 TDL00570 TDL00590 TDL00590
0021 0 0022 0 0023 0 0024 0 0025 0 0026 0 0027 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0028 0 0030 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST	DC	E /	efff		TDL00360 TDL00400 TDL00401 TDL00401 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00470 TDL00480 TDL00510 TDL00510 TDL00520 TDL00550 TDL00550 TDL00570 TDL00570 TDL00580 TDL00580 TDL00580 TDL00580 TDL00580 TDL00600 TDL00610 TDL00620
0021 0 0022 0 0023 0 0024 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 002E 0 002E 0 0031 0 0031 0 0031 0 0033 0 0034 0 0035 0 0036 0 0037 0 0038 0 0038 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST *	DC D	E /	FFFF	SENSE AND RESET DSW	TDL00360 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00460 TDL00500 TDL00510 TDL00510 TDL00550 TDL00550 TDL00560 TDL00570 TDL00580 TDL00580 TDL00590 TDL00630 TDL00630 TDL00630 TDL00630
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0021 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 00	07E9  FFFF 0000 0000 0000 0000 0000 0000 0	LAST *	DC D	C R +	FFFFF	SENSE AND RESET DSW BR OUT OF INTERRUPT	TDL00360 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00450 TDL00450 TDL00460 TDL00460 TDL00460 TDL00510 TDL00510 TDL00550 TDL00560 TDL00570 TDL00570 TDL00570 TDL00570 TDL00570 TDL00570 TDL00570 TDL00570 TDL00570 TDL00600 TDL00630 TDL00630 TDL00630 TDL00640
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0021 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST *	DC D	C R + 0	FFFF		TDL00360 TDL00401 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00500 TDL00510 TDL00520 TDL00520 TDL00550 TDL00550 TDL00550 TDL00560 TDL00570 TDL00570 TDL00580 TDL00560 TDL00660 TDL00650
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0020 0 0031 0 0031 0 0033 0 0034 0 0035 0 0036 0 0037 0 0038 0 0038 0 0038 0 0038 0 0038 0 0038 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST *	DC D	C R + 0	FFFFF		TDL00360 TDL00401 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00470 TDL00460 TDL00500 TDL00510 TDL00550 TDL00560 TDL00560 TDL00560 TDL00560 TDL00560 TDL00560 TDL00560 TDL00660 TDL00660 TDL00660 TDL00660
0021 0 0022 0 0023 0 0025 0 0026 0 0027 0 0028 0 0029 0 0028 0 0020 0 0020 0 0021 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0 0031 0	09E9  FFFF 0000 0000 0000 0000 0000 0000	LAST *	DC D	C R + 0	FFFF		TDL00360 TDL00401 TDL00401 TDL00402 TDL00410 TDL00420 TDL00430 TDL00440 TDL00450 TDL00460 TDL00460 TDL00500 TDL00510 TDL00520 TDL00520 TDL00550 TDL00550 TDL00550 TDL00560 TDL00570 TDL00570 TDL00580 TDL00560 TDL00660 TDL00650

BASIC DIAGNOSTIC LOADER PAPER TAPE BASIC LOADER

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•							
0049 0	0000		DC				TDLC0680
0041 0	0000		DC			•	TDL00690
0042 0	0000		DC				TDL00700
0043 0	D09F	CONI		X	/0010-STOR	?E-1	TDL00710
0044 0	004E	CON2	DC		RDEVN		TDL00720
0045 0	0028	CON3	DC		40		TDL00730
0046 0	7F00	DELET			/7F00		TDLC0740
0047 0	7006	FIX		X	Y-X-1		TDLC0750
0048 0	COED	REFIX	-	X	PDEVN-X-1		TDL00760
0049 0	0000	WENT	DC	•	0		TDL00770
004A 0	4000	K4C00			74000		TDLC0780
004B 0	ECFO	KECFO			/ECFO	PUNCH BIT MASK	TDL00790
		KUCOO			\0C00	FORCH BIT HASK	TDLC0800
0040 0	0000 4000	K4000			/4000		TDL00810
004D 0		RDEVN			/0000		TDL00820
004E 0	0000				\0000		TDL00830
004F 0	0000	RDODD *	UC		70000		TDLC084C
0050 0	5053				CON1		TDL00850
0050 0	COF2	LOAD	LD			RESTORE STORE INST.	TDL00860
0051 0	DOLE		STO		STORE	KESTURE STURE THEST.	TDL00870
0052 0	COF1		LD		CON2	0557005 0010 105	
0053 0	DOSE		STO		RDIN	RESTORE RDIN LOC.	TDL00880
0054 0	COFO		LD		CON3		TDL00890
0.055 0	DOF3		STO		WCNT		TDL00900
0056 0	COF1		LD		REFIX		TDLC0910
0057 0	D008		STO		X		TDL00920
		*					TDL00930
0058 0	0823	SR TR D			K0001	START READ	TDL00940
0059 0	0826		XIO		SENSE	SENSE DSW	TDLC0950
005A 0	EOF0		AND		KECFO	MASK OUT PUNCH BITS	TDL00960
005B 0	FOF 1		EOR		K4000		TDL009 <b>7</b> 0
0050 0	4820		BSC		Z	SKIP IF COL. REQUEST	TDL00980
005D 0	7039		MDX		CONT1		TDL00990
		*					TDL01000
005E 0	081F	PACK	XIO .		RESET	RESET DSW	TDL0 10 10
005F 0	0822		XIO		RDIN	READ A COLUMN	TDL01020
0.060 0	COED	X	LD		RDEVN		TDL01030
0061 0	90E4		S		DELET		TDL01040
0062 0	4820		BSC		2		TDL01050
0063 0	7001		MDX		*+1		TDL01060
0064 0	70F3		MDX		SRTRD		TDL01070
0065 0	COEI		LD		FIX		TDL01080
0066 0	DOF9		STO		X		TDL01090
0067 0	CO1A	Y	LD		RDIN	SET NEXT READ IN LOCATION	TDL01100
0068 0	F013	•	EOR		K0001	SET HEAT HEAD IN LOOKITON	TDL01110
0069 0	DO 1 8		STO		RDIN		TDL01120
0.06A 0	F0D9		EOR		CONZ		TDL01130
0068 0	4820		BSC		7	SKIP IF BOTH HALF WORDS IN	TDLC1140
0060 0	70EB		MDX		SR TRD	JATE TO BOTH THE WORLD IN	TDL01150
0060 0	COED		LD		RDEVN	COMBINE HALF WORDS	TDL01160
	1808		SRA		8	COMPTRE THE WORKS	TDL01170
006E 0	FODF		EOR		RDOOD		TDL01180
JUGF U	1 001	*	LUN				TDL01190
0070-0	D19F	STORE	STO		/0010	STORE FULL WORD	TDL01200
0071 0	COFE	31046	LD		STORE	SET NEXT WORD LOCATION	TDL01210
			A			JET MENT WOND LOCATION	TDL01210
0072 0	8009 DOEC		STO		KOOO L		TDL01220
0073 0	DOFC				STORE		TDL01240
0074 0	C0D4		FD		WCNT		
0075 0	9006		S		K0001		TOL01250
0076 0	D0 D 2		STO		WENT		TDL01260
0077 0	4820		BSC		7		TDL01270
0078 0	70DF		MDX		SRTRD		TDL01280
0079 0	7028		MDX		DATA		TDL01290
007A 0	7099	HOP	MDX		/0014	START PROGRAM	TDL01300
		*					TDL01310
007B 0	0000	CKSUM			/0000		TDL01320
0070 0	0001	K0001			70001	READ CARD CONTROL COMMAND	TDL01330
007D 0	1C 1O		DC		/1010		TDL01340
007E 0	0000	RESET	DC		0000	RESET DSW CONTROL COMMAND	TDL01350

0075 0	1501		20	41501		TD101340
007F 0	1F01	CENCE	DC	/1F01		TDLC 1360
0080 0	0004	SENSE		/0004	SENSE DSW CONTROL COMMAND	TDL01370
0081 0	1F00	DOTAL	DC	/1F00	READ COL. CONTROL COMMAND	TDL01380 TDL01390
0082 0	004E	RDIN	DC	RDEVN	READ COL. CONTROL COMMAND	TDLC140C
0083 0	1400	K0037	DC	/1A00 /0037		TDL01410
0084 0 0085 0	0037 0034			/0034		TDL01420
		K0034		/0010		TDLC1430
0086 0	0010	K0010		70010		TDL01440
0087 0 0088 0	0000		DC DC			TDLC1450
0089 0	0000		DC			TDL01460
0034 C	0000		DC			TDL01470
0088 0	0000		DC			TDL01480
0086 0	1000		DC			TDLC1490
0080 0	0000		DC			TDL01500
008E 0	0000		DC			TDLC1510
008F 0	0000		DC			TDL01520
0090 0	0000		DC			TDL01530
0091 0	0000		DC			TDL01540
0092 0	0000		DC			TDL01550
0093 0	0000		DC			TDL01555
0093 0	0000	•	<i>b</i> <b>c</b>			TDL01560
0094 0	F087	ERROR	FUB	KOCCO	RESTORE ACC TO DSW	TDLC1570
0095 0	30F4	LINION	WAIT		**ERR. DSW IN ACC.	TDLC1580
0096 0	7002		MDX	SRTRD+1	PRESS START TO RETRY	TDL01590
00/0 0	1002	*	···DA	3	THE ST STANT TO METHY	TDL01600
0097 0	F0B2	CONT 1	FOR	K4CCO	CHK BITS 4 AND 5 ONLY	TDLC1610
0098 0	4820	00.41 1	BSC	Z	SKIP BUSY AND NOT READY	TDL01620
0099 0	70FA		MDX	ERROR	SKIT BOST AND NOT WEAD!	TDL01630
009A 0	708E		MDX	SR TRD+1		TDL01640
009B 0	0000		DC	3 (1) 3 (2)		TDLC166C
0090 0	0000		DC			TDL01670
009D 0	0000		DC			TDL01680
111141 ()						TDLC1690
009E 0	0000		DC DC			TDL01690 TDL01700
009F 0	0000		DC			TDL01700
009F 0 00A0 0	0000 0000		DC DC			TDL01700 TDL01710
009F 0	0000	*	DC			TDL01700 TDL01710 TDL01720
009F 0 00A0 0	0000 0000	* * CI	DC DC	WORD COU	NT OF ZERO	TDL01700 TDL01710
009F 0 00A0 0	0000 0000	* *CI	DC DC	WORD COU	NT OF ZERO	TDL01700 TDL01710 TDL01720 TDL01730
009F 0 00A0 0	0000 0000		DC DC	WORD COU!	NT OF ZEROGET WORD COUNT	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740
009F 0 00A0 9 00A1 3	0000 0000 0000	*	DC DC DC HECK FOR			TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDLC1750
009F 0 00A0 9 00A1 3	0000 0000 0000	*	DC DC DC HECK FOR	/0034	GET WORD COUNT	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760
009F 0 00A0 9 00A1 3	0000 0000 0000 C091 4820	*	DC DC DC HECK FOR LD BSC	/0034 Z SUM1	GET WORD COUNT	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770
009F 0 00A0 9 00A1 3 00A2 0 00A3 0 00A4 0	0000 0000 0000 C091 4820 7002	*	DC DC DC HECK FOR LD BSC MDX	/0034 Z SUM1	GET WORD COUNT SKIP IF WORD COUNT ZERO	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01770 TDL01780
009F 0 00A0 0 00A1 0 00A2 0 00A3 0 00A4 0 00A5 0	0000 0000 0000 C091 4820 7002 30F5	*	DC DC DC HECK FOR LD BSC MDX WAIT	/0034 Z SUM1 -11	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01770 TDL01790 TDL01800 TDL01810
009F 0 00A0 0 00A1 0 00A2 0 00A3 0 00A4 0 00A5 0	0000 0000 0000 C091 4820 7002 30F5	* DATA	DC DC DC HECK FOR LD BSC MOX WAIT MDX	/0034 Z SUM1 -11 LOAD	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01780 TDL01810 TDL01810 TDL01820
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 9 00A6 0	0000 0000 0000 C091 4820 7602 30F5 70A9	DATA	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE	/0034 Z SUM1 -11 LOAD	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01820 TDL01830
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 9 00A6 0	0000 0000 0000 C091 4820 7002 30F5 70A9	* DATA	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE	/0034 Z SUM1 -11 LOAD ECK SUM DI	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING	TDL01700 TDL01710 TDL01720 TDL01740 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01780 TDL01810 TDL01810 TDL01820 TDL01820 TDL01830 TDL01840
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 0 00A6 0	0000 0000 0000 C091 4820 7002 30F5 70A9	DATA	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO	/0034 Z SUM1 -11 : LOAD ECK SUM OI KOO10 CKLOD+1	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01790 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01840 TDL01850
009F 0 00A0 0 00A1 J 00A2 0 00A3 0 00A4 0 00A5 0 00A6 0	0000 0000 0000 C091 4820 7002 30F5 70A9	DATA	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA	/0034 Z SUM1 -11 : LOAD ECK SUM OF KOO10 CKLOD+1 16	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01790 TDL01800 TDL01810 TDL01820 TDL01830 TDL01830 TDL01840 TDL01850 TDL01860
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 0 00A6 0	CODE CODE CODE CODE CODE CODE CODE CODE	DATA	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO	/0034 Z SUM1 -11 LOAD ECK SUM OF KOO10 CKLOD+1 16 CKSUM	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01790 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01850 TDL01870
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 9 00A6 0	COP1 4820 7002 30F5 70A9	* DATA  * * SUM1	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD	/0034 Z SUM1 -11 LOAD ECK SUM OF KOO10 CKLOD+1 16 CK SUM CKSUM	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01840 TDL01850 TDL01860 TDL01860 TDL01870 TDL01880
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 9 00A6 0	CODE DODA 1810 DODO COCF 8400FFFF	DATA	DC DC DC HECK FOR LD BSC MOX WAIT MDX -FORM CHE LD STO SRA STO LD A L	/0034 Z SUM1 -11 LOAD ECK SUM OF KOO10 CKLOD+1 16 CK SUM CKSUM /FFFF	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01870 TDL01870 TDL01870 TDL01870 TDL01880 TDL01890
009F 0 00A0 9 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0	CODE CODE CODE CODE CODE CODE CODE COCE B400FFFF DOCC	* DATA  * * SUM1	DC D	/0034 Z SUM1 -11 LOAD  KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36	TDL01700 TDL01710 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01770 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01850 TDL01860 TDL01870 TDL01880 TDL01880 TDL01890 TDL01890
009F 0 00A0 9 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0	0000 0000 0000 0000 C091 4820 7002 30F5 70A9 CODE 0004 1810 D000 COCF 8400FFFF D0CC COFD	* DATA  * * SUM1	DC DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A L STO LD	/0034 Z SUM1 -11 LOAD ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010	TDL01700 TDL01710 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01810 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01860 TDL01860 TDL01860 TDL01880 TDL01890 TDL01890 TDL01910
009F 0 00A0 9 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOOA 1810 DODO COCF 840 OFFFF DOCC COFD 80CB	* DATA  * * SUM1	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A L STO LD A L	/0034 Z SUM1 -11 LOAD ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01	GET WORD COUNT SKIP IF WORD COUNT ZERO **FRR. WORD COUNT IS ZERO START CONTINUES LOADING F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01760 TDL01780 TDL01780 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01860 TDL01870 TDL01880 TDL01870 TDL01890 TDL01900 TDL01900 TDL01910 TDL01920
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 9 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0	COP1 4820 7002 30F5 70A9 CODE DOC4 1810 DODO COCF 8400FFFF DOCC COFD 80CB DOFB	* DATA  * * SUM1	DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A STO LD A STO	/0034 Z SUM1 -11 LOAD ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS	TDL01700 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01850 TDL01870 TDL01880 TDL01880 TDL01890 TDL01910 TDL01910 TDL01910 TDL01920 TDL01930
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0	COP1 4820 7002 30F5 70A9 CODE DO04 1810 DODO COCF 8400FFFF DOCC COFD 80CB DOFB FOD1	* DATA  * * SUM1	DC D	/0034 Z SUM1 -11	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36  SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE	TDL01700 TDL01710 TDL01710 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01840 TDL01850 TDL01870 TDL01870 TDL01890 TDL01890 TDL01990 TDL01990 TDL01920 TDL01930 TDL01930 TDL01940
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 9 00A6 0 00A8 0 00A9 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0	COP1 4820 7602 30F5 70A9  CODE DO04 1810 DOD0 COCF 8400FFFF DOCC COFD 80CB DOFB FOD1 4820	* DATA  * * SUM1	DC DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A L STO LD A L STO LD A STO LD A L STO LD LD LD A L STO LD LD LD A L STO LD	/0034 Z SUM1 -11 LOAD  ECK SUM OF  K0010 CKLOD+1 16 CK SUM CKSUM /FFFF CK SUM CKLOD+1 K0001 CKLOD+1 K0001 CKLOD+1	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS	TDL01700 TDL01710 TDL01710 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01810 TDL01840 TDL01840 TDL01850 TDL01860 TDL01890 TDL01890 TDL01990 TDL01910 TDL01920 TDL01920 TDL01930
009F 0 00A0 9 00A1 J 00A2 0 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE CODE CODE CODE CODE CODE CODE COCE B400FFFF DOCC COFD BOCB DOFB FOD1 4820 70F6	* DATA  * * SUM1	DC D	/0034 Z SUM1 -11 LOAD  KOO10 CKLOD+1 16 CK SUM CKSUM /FFFF CK SUM CKLOD+1 KOO01 CKLOD+7 KOO37 Z CKLOD-1	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36  SET ACC. TO /COIC  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED	TDL01700 TDL01710 TDL01710 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01860 TDL01860 TDL01890 TDL01890 TDL01910 TDL01910 TDL01920 TDL01930 TDL01940 TDL01930 TDL01940 TDL01950 TDL01960
009F 0 00A0 0 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOOG CODE TOOG TOOG TOOG TOOG TOOG TOOG TOOG TOO	* DATA  * * SUM1	DC DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A L STO LD A ST	/0034 Z SUM1 -11 LOAD  ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+2 KOO37 Z CKLOD-1 CKSUM	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36	TDL01700 TDL01710 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01810 TDL01810 TDL01810 TDL01820 TDL01840 TDL01860 TDL01860 TDL01860 TDL01860 TDL01860 TDL01890 TDL01910 TDL01910 TDL01920 TDL01920 TDL01930 TDL01940 TDL01950 TDL01960 TDL01970
009F 0 00A0 0 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOCA 1810 DODO COCF 8400FFFF DOCC COFD 80CB DOFB FOD1 4820 7766 C705 4820	* DATA  * * SUM1	DC DC DC DC HECK FOR  LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A L STO LD A STO EOR BSC MDX LD BSC	/0034 Z SUM1 -11 LOAD  ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+2 KOO37 Z CKLOD-1 CKSUM Z	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36  SET ACC. TO /COIC  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT	TDL01700 TDL01710 TDL01710 TDL01720 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01810 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01860 TDL01860 TDL01890 TDL01890 TDL01990 TDL01910 TDL01920 TDL01930 TDL01940 TDL01950 TDL01950 TDL01950 TDL01960 TDL01970 TDL01960 TDL01970 TDL01970 TDL01970 TDL01980
009F 0 00A0 0 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOOG CODE TOOG TOOG TOOG TOOG TOOG TOOG TOOG TOO	* DATA  * TOTAL SUM1	DC DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO SRA STO LD A L STO LD A ST	/0034 Z SUM1 -11 LOAD  ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+2 KOO37 Z CKLOD-1 CKSUM Z	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36 SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36  MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36	TDL01700 TDL01710 TDL01710 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01800 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01870 TDL01880 TDL01890 TDL01910 TDL01910 TDL01910 TDL01920 TDL01930 TDL01940 TDL01950 TDL01950 TDL01960 TDL01970 TDL01970 TDL01980 TDL01970 TDL01980 TDL01970 TDL01980 TDL01970 TDL01980 TDL01970 TDL01980 TDL01970
009F 0 00A0 0 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOCA 1810 DODO COCF 8400FFFF DOCC COFD 80CB DOFB FOD1 4820 7766 C705 4820	* TOATA  * TOATA  * TOATA  CKLOD	DC DC DC DC HECK FOR LD BSC MDX WAIT MDX -FORM CHE LD STO STO LD A L STO LD A L STO LD A STO EOR BSC MDX L BSC WAIT	/0034 Z SUM1 -11	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36  SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM	TDL01700 TDL01710 TDL01710 TDL01730 TDL01740 TDL01750 TDL01760 TDL01770 TDL01770 TDL01780 TDL01800 TDL01810 TDL01810 TDL01830 TDL01840 TDL01850 TDL01850 TDL01860 TDL01870 TDL01890 TDL01990 TDL01910 TDL01910 TDL01950 TDL01950 TDL01950 TDL01950 TDL01980 TDL01950 TDL01960 TDL01970 TDL01980 TDL01970 TDL01980 TDL01990 TDL01990
009F 0 00A0 0 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOCA 1810 DODO COCF 8400FFFF DOCC COFD 80CB DOFB FOD1 4820 7766 C705 4820	* TOATA  * TOATA  * TOATA  * TOATA	DC D	/0034 Z SUM1 -11 LOAD  ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO037 Z CKLOD-1 CKSUM Z -10 MAGE TO T	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36  SET ACC. TO /COIC  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM  HE LOCS. BEGINING AT	TDL01700 TDL01710 TDL01710 TDL01720 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01850 TDL01850 TDL01850 TDL01890 TDL01910 TDL01920 TDL01910 TDL01920 TDL01930 TDL01930 TDL01930 TDL01930 TDL01930 TDL01940 TDL01950 TDL01950 TDL01960 TDL01970 TDL01970 TDL01980 TDL01980 TDL01980 TDL01980 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990
009F 0 00A0 0 00A1 J 00A3 0 00A4 0 00A5 0 00A6 0 00A8 0 00A8 0 00A8 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0 00AB 0	CODE DOCA 1810 DODO COCF 8400FFFF DOCC COFD 80CB DOFB FOD1 4820 7766 C705 4820	* TOATA  * TOATA  * TOATA  * TOATA	DC D	/0034 Z SUM1 -11 LOAD  ECK SUM OF KOO10 CKLOD+1 16 CKSUM CKSUM /FFFF CKSUM CKLOD+1 KOO01 CKLOD+1 KOO037 Z CKLOD-1 CKSUM Z -10 MAGE TO T	GET WORD COUNT SKIP IF WORD COUNT ZERO  **FRR. WORD COUNT IS ZERO START CONTINUES LOADING  F CARD IMAGE LOCS.*10-36  SET ACC. TO /0010  FORM SUM OF LOCS.10 THRU 36 MODIFY ADDRESS  CHECK THAT ALL WORDS DONE SKIP ALL LOCS. ADDED  LOAD SUM 10 THRU 36 SKIP SUM IS CORRECT **ERR. IN CHECK SUM	TDL01700 TDL01710 TDL01710 TDL01720 TDL01740 TDL01750 TDL01760 TDL01770 TDL01780 TDL01810 TDL01810 TDL01820 TDL01830 TDL01840 TDL01850 TDL01850 TDL01850 TDL01850 TDL01890 TDL01910 TDL01920 TDL01910 TDL01920 TDL01930 TDL01930 TDL01930 TDL01930 TDL01930 TDL01940 TDL01950 TDL01950 TDL01960 TDL01970 TDL01970 TDL01980 TDL01980 TDL01980 TDL01980 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990 TDL01990

BASIC DIAGNOSTIC LOADER PAPER TAPE BASIC LOADER

0088 00	C4000035	MOVE	LD	L	/0035	GET ADDRESS FOR FIRST WORD	TDL02040
COBA C	4820		BSC		Z	SKIP ADDRESS IS 0000	TDL02050
0088 0	7001		MDX		STRE		TDL02060
OOBC C	708D		MDX		HOP	START PROGRAM VIA HOP	TDL02070
00BD 0	DOOC	STRE	STO		PUT+1	SET FIRST WORD ADDRESS	TDL02080
COBE O	COC 7		LD		K0010	SET ACC. EQU. 0010	TDL02090
00BF 0	DO 1		STO		GET+1	SET TO GET FIRST WORD AT O	TDL02100
	C400FFFF	GET	LD		/FFFF	GET PROG. WORD	TDL02110
		GEI		L	-	GE! PRUG. WORD	TDL02110
<b>9002 0</b>	7006		MDX		PUT		
		*					TDL02130
0003 0	0010		DC		/0010		TDL02140
0004 0	0000		DC		•		TDL02150
0005 0	0000		DC				TDL02160
0 000	0000		DC				TDL02170
0007 0	იიიი		DC				TDL02171
0.008	0000		DC				TDL02172
		*					TDL02180
0009 00	D400FFFF	PUT	STO	L	/FFFF	PUT PROG. WORD	TDL02190
OOCB O	COFE		LD	_	PUT+1	MODIFY PUT	TDL02200
0 0000	80AF		A		K0001		TDL02210
00CD 0	DOFC		ŝto		PUT+1		TDL02220
0.000	COF2					MODIEY CET	
			LD		GET+1	MODIFY GET	TDL02230
00CF G	80AC		A		K0001		TDL02240
0000 0	DO F 0		STO		GET+1		TDL02250
0.001 0	FOB3		EOR		K0034	CHECK FOR ALL WORDS MOVED	TDL02260
0002 0	4820		BSC		Z	SKIP ALL WORDS MOVED	TDL02270
0003 0	70EC		MDX		GE T		TDL02280
0004 00	C4000035	SUM2	LD	L	/0035	GET ADDRESS OF FIRST WORD	TDL02290
0.006	7003		STO		CKMOV+1	PUT IT INTO ROUTINE	TDL02300
00D7 0	COAE		LD		K0010	SET TO GET FIRST WORD OF	TDL02310
onda n	Drn 3		STO		COMP+1	I MA GE	TDL02320
0009 00	C400 FFFF	CKMOV	LD	L	/FFFF	GET WORD MOVED	TDLC2330
CODB 00	F400FFFF	COMP	EOR	Ĺ	/FFFF	COMPARE WITH CARD IMAGE	TDL02340
CODD O	4820	017	BSC	-	7	SKIP WORD STORED OK	TDL02350
00DE 0	30F7		WAIT		-9	**ERR. WORD NOT STORED OK.	TDL02360
00DF 0	COFA		LD		CKMDV+1	MODIFY FOR NEXT WORD	TDL02370
00E0 0	809B					MUDIFY FUR NEXT WORD	
			A		KOCO1		TDL02380
00E1 0	DOF 8		STO	~	CKMOV+1		TDL02390
00E2 0	COF9		LD		COMP+1	MODIFY FOR NEXT COMPARE	TDL02400
00E3 0	8098		A		K0001		TDL02410
00E4 0	DOF7		STO		COMP+1		TDL02420
00E5 0	F09F		EUK		K0034	CHECK IF ALL DONE	TDL02430
0.056	4820		BSC		Z	SKIP ALL WORDS CHECKED	TDL02440
<b>00</b> E7 0	70F1		MDX		CKMOV		TDL02450
00E8 0	70BD		MDX		SUM1-1	GO GET NEXT CARD	TDL02460
00E9	0000	END	BSS		0		TDL02470
OOEA	0050		END		LOAD		TDL02480

BASIC DIAGNOSTIC LOADER PAPER TAPE BASIC LOADER

### CROSS REFERENCE LISTING

```
SYMBOL VALUE
                 REFERENCES
CHKSM
       0020
                 0012,0015,0010
CKLOD
       OOAC
                 COA8,0CAF,00B1,00B4
CKMCV
       00D9
                 00D6,00DF,00E1,00E7
CKSUM
       0078
                 OOAA O CAB, COAE, OCB5
COMP
       00 D B
                 00D8,00E2,00E4
CONT1
       0097
                 00 5D
CONI
       .0043
                 00 50
CON2
                 0052,006A
       0044
CON3
        0045
DATA
       00A2
                 0079
       0046
DELET
                 00.61
END
       00E9
                 00 21
ERROR
       0094
FIX
        0047
                 00.65
GET
        0000
                 00BF,00CE,00DC,00D3
HOP
        007A
                 COBC
INT
        003A
                 99.00
KECFO
       CO4B
                 00 5A
KOCOO
       0040
                 00 94
K0001
       007C
                 0017,0058,0068,0072,0075,0080,000C,000F,00E0,00E3
K0010
       0086
                 00A7,00B2,00D7
K0034
       0085
                 00D1,00E5
K0037
       0084
                 00 B2
K4C00
       004A
                 0097
K4000
       004D
                 00 5B
LAST
       0021
                 0019
LOAD
                 001F,00A6,00E9
       0050
MOVE
        COB8
PACK
       005E
PUT
       0009
                 00BD,0CC2,00CB,0CCD
RDEVN
       0045
                 0044,0048,0060,0060,0082
                 0053,0C5F,0067,0069
RDIN
       0082
RDODD
       004F
                 00 6F
REFIX
       0048
                 00 56
RESET
       007E
                 003B,005E
SENSE
       0080
                 0059
SRTRD
       0058
                 0064,006C,0078,0096,009A
STORE
       0070
                 0043,0051,0071,0073
STRE
       COBD
                 00 BC
                 0000,0016,0018,0018
STRT
       0012
SUM1
       00A7
                 00A4,00E8
SUM2
       0004
       0049
                 0055,0074,0076
WCNT
       0060
                 0047,0048,0057,0066
       0067
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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

ONE-CARD DIAGNOSTIC PROGRAMS

#### PURPOSE

THE ONF-CARD PROGRAMS ARE SHORT TESTS USED TO HELP ISOLATE FAILING FUNCTIONS THAT KEEP THE BASIC DIAGNOSTIC LOADER FROM OPERATING CORRECTLY. THERE ARE SEVEN ONE-CARD PROGRAMS, SEQUENCE NUMBERED OI THROUGH O7 IN HOLLERITH — HEXADECIMAL CODE IN COLUMNS 79 AND 80. EACH PROGRAM IS RUN INDIVIDUALLY AND IS LOADED INTO CORE STORAGE USING THE PROGRAM LOAD MODE. REFER TO PARAGRAPH 5., COMMENTS, FOR PURPOSE AND DESCRIPTION OF FACH ONE-CARD PROGRAM.

INCLUDED IN THE APPENDIX, PARAGRAPHS 6.1 AND 6.2, ARE MANUAL ENTRY TEST PROGRAMS WHICH ARE LOADED BY MEANS OF THE CONSOLE ENTRY SWITCHES.. ONE PROGRAM IS A DATA PATH TEST, AND THE OTHER IS AN ADD TEST. THESE PROGRAMS PROVIDE ADDITIONAL AID IN ISOLATING MALFUNCTIONS.

#### 2. PREREQUISITES

2.1 PROGRAM PREREOUTSITES

NO ADDITIONAL PROGRAMS ARE REQUIRED.

- 2.2 EQUIPMENT PREREQUISITES
  - A. 1131 CENTRAL PROCESSING UNIT (CPU).
    B. 1442 CARD READ/PUNCH OR PAPER TAPE.
  - B. 1442 CARD READ/PUNCH OR PAPER TAPE.
     C. 2501 CARD READER (USE ONLY CARDS 1-6) 7=ERROR.
- 3. USE PROCEDURE

### 3.1 GENERAL INFORMATION

THE FASTEST WAY TO ISOLATE A FAILURE WITH THE ONE-CARD PROGRAMS IS TO STEP THROUGH EACH ONE-CARD PROGRAM LOOKING FOR ONE OF THE ERROR CONDITIONS POSSIBLE.

THE POSSIBLE ERROR CONDITIONS ARE,

- A. STOP AT ERROR WAIT.
- B. INCORRECT REGISTER READINGS AT A NORMAL WAIT.
- C. FAILURE TO STOP AT A NORMAL WAIT.

IF THE ABOVE ERROR CONDITIONS DO NOT OCCUR, IT WILL BE NECESSARY TO RELY ON WHATEVER ERROR CONDITIONS APPEAR.

NOPMAL WAITS-300X. NORMAL WAITS HAVE AS THEIR LAST DIGIT THE NUMBER OF THE ONE-CARD PROGRAM WHERE THEY OCCUR. FOR EXAMPLE WAIT 3003 IDENTIFIES A NORMAL WAIT IN ONE-CARD PROGRAM 03. WHEN A PROGRAM HAS MORE THAN ONE NORMAL WAIT, REFERENCE TO THE INSTRUCTION ADDRESS REGISTER READING IS NECESSARY, TO CORRECTLY IDENTIFY THE WAIT.

ERPOR WAITS — 30FX. THE LAST DIGIT OF AN ERROR WAIT IDENTIFIES THE ONE-CARD PROGRAM WHERE WAIT OCCURS. THE NEXT TO LAST DIGIT, F. IDENTIFIES THE WAIT AS BEING AN ERROR WAIT. WHEN MORE THAN ONE ERROR WAIT OCCURS IN A DNE-CARD PROGRAM, REFERENCE TO THE INSTUCTION ADDRESS REGISTER IS NECESSARY TO CORRECTLY IDENTIFY THE ERROR WAIT.

WHEN AN ERROR INDICATION OCCURS, THE LISTING OF THE PROGRAM BEING EXECUTED MUST BE REFERENCED TO DETERMINE THE CAUSE OF THE ERROR. CORRECT LOADING SHOULD BE VERIFIED BY DISPLAYING CONTENTS OF LOCATIONS WHERE THE PROGRAM IS STORED. THE PROGRAM SHOULD THEN BE RUN IN SI MODE TO LOCATE POINT OF FAILURE.

### 3.2 OPERATING PROCEDURE

- A. PLACE ALL SEVEN ONE-CARD PROGRAMS, FOLLOWED BY DECK OF BLANK CARDS IN 1442 HOPPER AND PRESS START BUTTON.
- B. CLEAR CORE STORAGE TO 33FF AS FOLLOWS.
  - 1. SET MODE SWITCH TO RUN.
  - 2. SET CONSOLE ENTRY SWITCHES TO 33FF.
  - 3. TURN ON STORAGE LOAD SWITCH (ON CE PANEL).
  - 4. PRESS START.
  - 5. PRESS IMM STOP.
  - 6. TURN DEF STORAGE LOAD SWITCH (ON CE PANEL).
- C. PRESS IMM STOP KEY.
- D. PRESS RESET KEY.
- E. PRESS PROGRAM LOAD.

ONE-CARD OI SHOULD LOAD AND PROGRAM SHOULD STOP AT NORMAL WAIT 3001 (1AR = 0002). FROM THIS POINT ON, PROCEED ACCORDING TO INSTRUCTIONS GIVEN FOR THE WAIT THE PROGRAM HAS STOPPED AT. SEE TABLE 1 FOR NORMAL WAITS, AND TABLE 2 FOR ERROR WAITS.

### TABLE I. NORMAL WAITS

NOTE. IN THIS TABLE SBR=STORAGE BUFFER REG, IAR=INSTRUCTION ADDRESS REG, AND ACC=ACCUMULATOR.

***	***	***	****	*********************
*	W	111	S	*
			****	INDICATES / ACTION
			IAR	
*		*		**************************************
* 30 * *	001	* * *		* ACCUMULATOR SHOULD READ FOFO. IF OK PRESS START.  * IF NOT FOFO ERROR IS INDICATED. REPAIR IF CAUSE IS CLEAR.  * IF NOT, CONTINUING TEST MAY HELP
* * *		* *	004E	* ACCUMULATOR SHOULD READ 080F. IF OK PRESS START.  * IF NOT 080F ERROR IS INDICATED. REPAIR IF CAUSE IS CLEAR.  * IF NOT, CONTINUING TEST MAY HELP.  * DEPRESS IMM STOP, RESET, AND PROGRAM LOAD BUTTONS TO LOAD CARD  * 02. FAILURE OF PROGRAM TO STOP AT THIS WAIT INDICATES FAILURE  * OF AN MOX OPERATION. STEPPING THROUGH PROGRAM IN SI MODE MAY  * HELP LOCATE FAILURE. IF CAUSE OF FAILURE IS CLEAR, REPAIR.  * IF THE FAILURE IS NOT CLEAR CONTINUING MAY HELP TO IDENTIFY  * THE FAILURE.
* * 3() * * *		* * * * * * -	:	* ACCUMULATOR SHOULD READ 003E. IF OK LOAD CARD 03 BY PRESSING * IMM STOP, RESET, AND PROGRAM LOAD BUTTONS. IF ADD. IS NOT * 003E, AN ERROR HAS OCCURRED. STEP THROUGH PROGRAM IN SING INST * MODE, CHECKING THAT IAR AND ACC DISPLAY THE SAME INFORMATION * AND ARE INCREMENTED BY ONF AT EACH STEP.
* 30 * * * * *		***	1	ACC SHOULD READ 0001. IF OK PRESS START.  FIF ACC IS NOT 0001, AN ERROR HAS OCCURED. STEP THROUGH FPROGRAM IN SI MODE, CHECKING THAT (1) ACC CONTAINS A ONE IN FBIT 0, (2) EACH SRA 1 INSTRUCTION IS EXECUTED PROPERLY, AND (3) FNO BSC Z CAUSES A SKIP UNLESS ACCUMULATOR EQUALS ZERO.

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## DATE 02JAN66 01MAY66 25JUL69 EC NO. 415490 415490B 571053

### TABLE 1. NORMAL WAITS (CONTINUED)

IRM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

ONE-CARD DIAGNOSTIC PROGRAMS

WA	115	**************************************
SBR	****** * IAR	* INDICATES / ACTION
3003	* 0025 : *	**************************************
3003	* : * :	* ACC SHOULD READ OFOF. IF CK PRESS START. * IF ACC IS NOT DEOF, ERROR HAS OCCURRED. SI THROUGH PROGRAM * FROM LOCATION 0025. COMPARE RESULTS OF TEST WITH LISTING. * CHECK FOR SINGLE-BIT OMISSION. TRY SWAPPING APPROPRIATE SLT * CARDS. (SEE LISTING).
	* *	ACC SHOULD READ FFFF. IF CK PRESS START.  FIF ACC IS NOT FFFF, ERROR HAS OCCURRED. SI THROUGH PROGRAM FFROM LOCATION 002E. COMPARE RESULTS OF TEST WITH LISTING.
	*	
	* *	ACC SHOULD READ FFFF. IF CK PRESS START.  IF ACC IS NOT FFFF, ERROR HAS OCCURRED. SI THROUGH PROGRAM. COMPARE RESULTS OF TEST WITH LISTING.
3004	0023	ACC SHOULD READ 0000. IF CK PRESS START.
. :	* 7	IF NO FRRORS OCCUR, THIS PROGRAM SHOULD RUN CONTINUOUSLY UNTIL STOPPED. IF NO ERRORS OCCUR, LOAD CARD 05 BY PRESSING IMM STOP, RESET, AND PROGRAM LOAD BUTTONS.
; 	*	IF ACC IS NOT 0000, ERROR HAS OCCURRED. SI THROUGH PROGRAM FROM LOCATION 001E. REFER TO LISTING.
*	* *	PRESS RESET THEN START TO CONTINUE.  MOST LIKELY ERROR WILL BE FAILURE OF PROGRAM TO STOP AT THIS WAIT. REFER TO LISTING. REFER TO PARAGRAPH 5.2.5 OF THIS DOCUMENT FOR DESCRIPTION OF CARD 05 PROGRAM.
1	* * * *	ACC SHOULD READ OFAF. IF OK LOAD CARD 06 BY PRESSING IMM STOP, RESET, AND PROGRAM LOAD BUTTONS.  IF ACC IS NOT OFAF, IT INDICATES THAT THE NUMBER OF LOCATIONS TESTED IS INCORRECT, ERROR MAY BE CAUSED BY ADD FAILURE, WHICH SHOULD BE DETECTABLE BY CARD 04 PROGRAM. PRESS START TO RESTART PROGRAM.

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### TABLE 1. NORMAL WAITS (CONTINUED)

*****************							
* WAITS *	*						
*****	* INDICATES / ACTION *						
* SBR * IAR 4	*						
* 3006 * 002E *	**************************************						
* * *	* OK PRESS START TO REPEAT TEST OR GO TO STEP B. *  *  *  IF PROGRAM STOPS AT WAIT B=30F6, REFER TO TABLE 2 - FRROR *						
* * *	* WAITS, FOR APPROPRIATE ACTION. * *						
* * * *	* B. SET CONSOLE ENTRY SWITCHES TO 0800 (END OF CARD SIMULATED *  DSW). PRESS START. PROGRAM SHOULD RETURN TO THIS WIAT. IF *  OK PRESS START TO REPEAT TEST, OR GO TO STEP C. *  *						
* *	<ul> <li>IF PROGRAM STOPS AT WAIT B=30F6, REFER TO TABLE 2 - ERROR *</li> <li>WAITS, FOR APPROPRIATE ACTION.</li> <li>*</li> </ul>						
*	* C. SET CONSOLE ENTRY SWITCHES TO 8003 (COL. REQUEST, BUSY, NOT *  * READY SIMULATED DSW). PRESS START. PROGRAM SHOULD RETURN TO *  * THIS WAIT. IF OK PRESS START TO REPEAT TEST, OR GO TO STEP *  * D.  *						
8 * *	* IF PROGRAM STOPS AT WAIT B=30F6, REFER TO TABLE 2 - ERROR *  * WAITS, FOR APPPOPRIATE ACTION.  * *						
* * * * * * * * * * * * * * * * * * *	* D. SET CONSOLE ENTRY SWITCHES TO AN INVALID DSW SETTING (OTHER *  THAN 0003, 0800, OR 8003). PRESS START. PROGRAM SHOULD STOP *  AT ERROR WAIT B=30F6, INDICATING THAT THE PROGRAM CORRECTLY *  SENSES AN ERROR DSW. PRESS START TO RETURN TO WAIT B=3006 *  (THIS WAIT) TO REPEAT TEST WITH SAME, OR DIFFERENT INVALID *  DSW.  *						
* * * * * *	* E. AFTER DETERMINING THAT CARD 06 PROGRAM REACTS CORPECTLY TO *  * THE SIMULATED DSW'S, LOAD CARD 07 BY PRESSING IMM STOP, *  * RESET, AND PROGRAM LOAD BUTTONS. *						
* 3007 * 0007 * * * * *	* A. ACC AND ACC EXTENSION SHOULD READ FFFF. IF OK GO TO STEP B. *  * IF NOT FFFF, LOAD DOUBLE OR ADD DOUBLE ERROR HAS OCCURRED. *  * SI THROUGH PROGRAM. REFER TO LISTING. *						
* * * * * * * * * * * * * * * * * * *	* B. TURN ON INTERRUPT DELAY SWITCH ( ON CE PANEL ).  * C. PRESS START. BLANK CARDS SHOULD FEED CONTINUOUSLY THROUGH  * THE READ STATION OF THE 1442.						
* * * *	* *** NOTF *** *						
* * * * * * *	* THERE ARE NO OTHER WAITS IN CARD OF PROGRAM IN ORDER TO  * PERMIT SCOPING OF X10 FUNCTIONS. CHANGE NO OP INSTRUCTION  * IN LOCATION 002C TO AN ERROR WAIT (30F7) TO CAUSE PROGRAM  *						
*	* TO STOP ON ERROR DSW. *						
* *	* D. PRESS STOP TO TERMINATE PROGRAM  *  * E. TURN OFF INTERRUPT DELAY SWITCH (ON CE PANEL).						
* * * * * * * * * * * * * * * * * * * *	* E. TORN OFF INTERROLL DEEX. SWITCH (SA SE ) MALE						

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM
ONE-CARD DIAGNOSTIC PROGRAMS

### TABLE 2. ERROR WAITS

NOTE. IN THIS TABLE SBR=STORAGE BUFFER REG. IAR=INSTRUCTION ADDRESS REG. AND ACC=ACCUMULATOR.

*****	****	***********
CRP #	*******	*
k <b>*</b>	* * * * * * * * * * * * * * * * * * *	**************************************
k	*	* ACC NOT 0000 WHEN TESTED. SI THROUGH PROGRAM CHECKING THAT  (1) ACC CONTAINS A ONE IN BIT 0, (2) EACH SRA 1 INSTRUCTION  IS EXECUTED CORRECTLY, AND (3) A SKIP OCCURS WHEN ACC EQUALS  ACC NOT 0000 WHEN TESTED. SI THROUGH PROGRAM FROM LOCATION  * OOZE. COMPARE RESULTS OF TEST WITH LISTING.  *
* * 30F4 *	** * 0014 *	* LDX LONG FAILURE. SI THROUGH PROGRAM. COMPARE RESULTS WITH * LISTING.
<b>*</b>	* *	* SUM OF SUMPL AND SUMMI IS NOT EQUAL TO 0000. IF THEIR SUM * * SHOULD EQUAL 0000, DIAGNOSE AND CORRECT TROUBLE. IF THEIR SUM * * SHOULD NOT BE 0000, RUU MANUAL-ENTRY ADD TEST (PARAGRAPH 6.2). * *
* *	* * * * * * * *	* SUM OF LOCATIONS 0014 THROUGH 004F IS NOT 0000. ACC CONTAINS  * OBTAINED SU. (1) RELOAD CARD 05, (2) RUN IN SI MODE THROUGH  * LOCATION 0010, (3) DISPLAY REMAINDER OF PROGRAM, AND (4)  * COMPARE PESULTS WITH LISTING.  * *  * IF NO FRROR IS EVIDENT, SI THROUGH CHECKSUM LOOP (LOCATIONS
, * * * *	* * * * * * * * * * * * * * * * * * *	* OO12 THROUGH OO1A).  * IF NO ERROR IS EVIDENT, (1) RELOAD CARD O5, (2) SI THROUGH  * LOCATION OOO8, (3) INSERT WAIT OP IN LOCATION OO11, (4) SET  * 70F6 IN LOCATION OO1A, AND (5) RUN CHECKSUM LOOP USING SI MODE  * FOR LOCATIONS OO11 AND OO13. VERIFY CHECKSUM ADDITION. REPAIR  * ANY FAILURES DISCOVERED.
* * 30F5 * * *	* * * * * * * * * * * * * * * * * * *	* A LOCATION DOES NOT CONTAIN ITS OWN ADDRESS PLUS ONE. PERFORM * FOLLOWING INSTRUCTION IN SI MODE. ADDRESS OF LOCATION IN ERROR * WILL BE IN ACC. DISPLAY ERROR LOCATION. IT SHOULD CONTAIN ITS * OWN ADDRESS PLUS ONE. AS A RESULT OF EXECUTING A BSI-1 AT THAT * LOCATION. DIAGNOSE AND CORRECT.
* 30F6 * * * * * * * * * *	* * * * *	* A. IF PROGRAM STOPS AT THIS WAIT FOLLOWING SETTING OF A VALID  * SIMULATED DSW IN CONSOLE ENTRY SWITCHES (0003, 0800, 8003). *  * AN FROOR IN INTERPRETING THE DSW HAS OCCURRED. SI THROUGH  * PROGRAM AND REFER TO LISTING, TO LOCATE CAUSE OF ERROR. *  * B. IF PROGRAM STOPS AT THIS WAIT AFTER SETTING AN INVALID  * IN THE CONSOLE ENTRY SWITCHES, THE PROGRAM OPERATED  * CORRECTLY. PRESS START TO RETURN TO NORMAL WAIT B=3006. *  **********************************

### 4. PRINTOUTS (NOT APPLICABLE)

#### 5. COMMENTS

THE ONE-CARD DIAGNOSTIC PROGRAMS ARE DESIGNED TO HELP DIAGNOSE MALFUNCTIONS THAT OCCUR WHILE ATTEMPTING TO LOAD A PROGRAM WITH THE 1130 BASIC DIAGNOSTIC L OADER. THERE ARE SEVEN ONE-CARD PROGRAMS. EACH ONE-CARD PROGRAM TESTS A SPECIFIC FUNCTION OR GROUP OF FUNCTIONS. THE CARDS ARE NUMBERED FROM 01 THROUGH 07 IN HOLLERITH-HEXADECIMAL CODE IN COLUMNS 79 AND 80.

FUNCTIONS OF ONE-CARD DIAGNOSTIC PROGRAMS
THE SEVEN ONE-CARD PROGRAMS PERFORM THEFFOLLOWING FUNCTIONS.

Α.	CARD 01.	TESTS MDX INSTRUCTION AND DATA TRANSFER FROM
_		INSTRUCTION ADDRESS REGISTER TO ACCUMULATOR.
В.	CARD 02.	EXECUTES A SIMPLE-ADDITION TEST AND TEST

INCREMENTING OF INSTRUCTION ADDRESS REGISTER.

C. CARD 03. TESTS BSC Z, SRA 1, LD, STD, AND EOR INSTRUCTIONS AND DATA TRANSFER BETWEEN REGISTERS.

D. CARD 04. TESTS LONG FORMAT OF LD, A, STO, LDX, EDR.
TEST ADDITION OF POSITIVE AND NEGATIVE NUMBERS.

F. CARD 05. TESTS ADDRESSING OF LOCATIONS 0050 THROUGH OFFE.

F. CARD 06. DETERMINES WHETHER 1131 CPU CORRECTLY INTERPRETS SIMULATED DSW'S.

G. CARD 07. TESTS LOAD DOUBLE AND ADD DOUBLE INSTRUCTIONS, AND SETS UP LOOPS TO ALLOW X10 FUNCTIONS TO BE CHECKED WITH AN OSCILLOSCOPE. X10 ROUTINES ARE DIAGNOSTIC LOADER BUT DO NOT STOP ON DSW ERROR.

## 5.2 DESCRIPTION OF ONE-CARD DIAGNOSTIC PROGRAMS

### 5.2.1. CARD-031 PROGRAM

THE CARD-01 PROGRAM LOADS ACCUMULATOR WITH FOFO FROM LOCATION 0030 AND STOPS AT WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0002 , STORAGE BUFFER INDICATING 3001, AND ACCUMULATOR INDICATING FOFO. FAILURE OF INDICATOR TO APPEAR AS DESCRIBED INDICATES A POSSIBLE READ-IN FAILURE DURING PROGRAM LOAD OR FAILURE OF THE LOAD-ACCUMULATOR INSTRUCTION. FOLLOWING DEPRESSION OF START PUSHBUTTON BY OPERATOR, PROGRAM LOADS ACCUMULATOR WITH 080F FROM LOCATION 0031 AND STOPS AT WAIT WITH INSTRUCTION ADDRESS INDICATING 0004, STORAGE BUFFER INDICATING 3001, AND ACCUMULATOR INDICATING 080F. AGAIN, FAILURE IF INDICATORS TO APPEAR AS DESCRIBED INDICATES POSSIBLE READ-IN FAILURE OR LOAD-ACCUMULATOR FAILURE. NEXT DEPRESSION OF START PUSHBUTTON, THE PROGRAM PERFORMS A SERIES OF MOX INSTRUCTIONS AND STOPS AT A WAIT WITH INSTRUCTION ADDRESS INDICATING 004E AND STORAGE BUFFER INDICATING 3001. IF PROGRAM STOPS AT ANY OTHER WAIT INSTRUCTION, AN MOX FAILURE IS INDICATED.

### 5.2.2 CARD-02 PROGRAM

ONE-CARD DIAGNOSTIC PROGRAMS

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

THE CARD-02 PROGRAM TESTS ADD FUNCTION AND INCREMENTING OF STORAGE ADDRESS REGISTER. THE PROGRAM LOADS A CONSTANT OF 0001 IN ACCUMULATOR FROM LOCATION 003F AND CONTINUOUSLY ADDS THAT SAME CONSTANT UNTIL STOPPED BY WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 003E. THE ACCUMULATED TOTAL IS DISPLAYED BY ACCUMULATOR INDICATOR AND SHOULD BE 003E. ANY OTHER TOTAL INDICATES AN ADD-FUNCTION FAILURE OR INSTRUCTION ADDRESS REGISTER INCREMENT FAILURE

### 5.2.3 CARD-03 PROGRAM

- A. PART ONE TESTS THE SKIP-ON-ZERO OPERATION AND SHIFT-RIGHT-ONE OPERATION.
- B. PART TWO TESTS DATA TRANSFER BETWEEN REGISTERS AS FOLLOWS.
  - DATA TRANSFER FROM STORAGE BUFFER REGISTER TO ARITHMETIC FACTOR REGISTER TO ACCUMULATOR REGISTER.
  - 2. DATA TRANSFER FROM ACCUMULATOR REGISTER TO ACCUMULATOR EXTENSION REGISTER AND BACK TO ACCUMULATOR REGISTER.
  - 3. DATA TRANSFER FROM ACCUMULATOR REGISTER TO STORAGE BUFFER REGISTER.
- C. PART THREE TESTS OPERATION FOR FUNCTION.

#### PART ONE

PROGRAM SETS A 1 IN ACCUMULATOR-BIT O AND THEN TRIES TO SKIP-ON-ZERO. AS THE ACCUMULATOR IS NOT ZERO, PROGRAM FALLS THROUGH AND SHIFTS RIGHT DNE POSITION. TESTING FOR ZERO AND SHIFTING RIGHT ONE IS CONTINUED UNTIL PROGRAM IS STOPPED BY WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0021. THE ACCUMULATOR SHOULD INDICATE 0001. ANY OTHER ACCUMULATOR INDICATION INDICATES FAILURE OF SRA 1 OR BSC Z.

AFTER DEPRESSION OF START PUSHBUTTON, PROGRAM PERFORMS A SHIFT-RIGHT-ONE OPERATION, AND SKIPS-ON-ZERO TO A WAIT 0025, STORAGE BUFFER INDICATING 3003. ACCUMULATOR SHOULD INDICATE 0000.

### PART TWO

UPON DEPRESSING START PUSHBUTTON, PROGRAM PERFORMS A SERIES OF ALTERNATE LD AND STO INSTRUCTIONS AND STOPS ON A WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0030 AND STORAGE BUFFER INDICATING 3003. ACCUMULATOR INDICATION SHOULD BE OFOF, OR DATA-TRANSFER FAILURE IS INDICATED. FAILURE MAY BE OCCURRING DURING A LD OR STO INSTRUCTION.

ONE-CARD DIAGNOSTIC PROGRAMS

PROGRAM TAKES ACCUMULATOR CONTENTS OF OFOF LEFT AT END OF PART TWO AND PERFORMS EOR OPERATION WITH CONSTANT FOFO. THE FFFF RESULT IS STOPED AT SYMBOLIC LOCATION KEFFF, AND PROGRAM STOPS ON WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0033. ACCUMULATOR INDICATOR SHOULD INDICATE FFFF, OR EOR FAILURE IS INDICATED.

AFTER DEPRESSING START PUSHBUTTON, PROGRAM PERFORMS EOR OF FEFF IN ACCUMULATOR WITH FEFF CONTAINED AT SYMBOLIC LOCATION KFEFF TO SET ACCUMULATOR TO 0000. A SKIP-ON-ZERO OPERATION IS THEN ATTEMPTED. IF EOR INSTRUCTION FAILS TO ZERO ACCUMULATOR, PROGRAM FALLS THROUGH TO AN ERROR WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0036, STORAGE BUFFER INDICATING 30F3. IF THE SKIP-ON-ZERO IS SUCCESSFULLY COMPLETED, THE PROGRAM PERFORMS EOR OF 0000 IN ACCUMULATOR AND 0000 AT SYMBOLIC LOCATION K0000. THE RESULTS OF EOR SHOULD BE 0000. PROGRAM TESTS THAT ACCUMULATOR IS 0000 BY ATTEMPTING SKIP-ON-ZERO. FAILURE TO SKIP STOPS PROGRAM AT WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0039, AND STORAGE BUFFER INDICATING 30F3, ACCUMULATOR INDICATOR SHOULD DISPLAY RESULT OF FAULTY EOR.

IF PROGRAM SKIPS, PROGRAM PERFORMS FOR OF 0000 IN ACC WITH CONSTANT FOFO IN SYMBOLIC LOCATION KF0FO. ACC CONTENTS BECOME F0FO. ANOTHER FOR IS PERFORMED WITH CONSTANT OFOF STORED IN HIGHEST STORAGE LOCATION. PROGRAM STOPS AT WAIT WITH IAR REG EQUAL 003C AND SBR REG EQUAL 3003. ACC SHOULD READ FFF. ANY OTHER READING INDICATES FOR FAILURE.

### 5.2.4 CARD-04 PROGRAM

THE CARD-04 PROGRAM LONG FORMAT OF LD, A, STO, LDX, EOR. THEN THE CARD-04 PROGRAM LONG FORMAT OF LD, A, STO, LDX, EOR. THEN PART OF THE PROGRAM MAKES UP LONG FORM INSTRUCTIONS THEN PERFORMS AN LDX LONG OVER AN ERROR WAIT. THE ERROR WAIT WITH INSTRUCTION ADDRESS INDICATING 0014 AND THE STORAGE BUFFER INDICATING 30F4 SHOWS A FAILURE OF THE LDX LONG FORMAT.

LONG FORMAT FOR THE REMAINING TESTS ARE DONE WHEN THE PROGRAM MAKES UP CONSTANTS FFFF AND 0000. THESE CONSTANTS ARE DISPLAYED AT NORMAL WAITS. AT EACH OF THESE WAITS THE REGISTERS REFERENCED SHOULD BE CHECKED. IF THE REGISTERS ARE OK, START SHOULD BE PRESSED.

AFTER THE START IS PUSHED FOLLOWING THE SECOND NORMAL WAIT, THE ADD TEST IS STARTED. THE ADD TEST MUST BE STOPPED BY THE OPERATOR.

THE ADD LOOP PROGRAM ADDS A MINUS ONE (FFFF) TO SUMMI (SUM MINUS), ADDS A PLUS ONE (0001) TO SUMPL (SUM PLUS), AND ADDS SUMMI AND SUMPL. THE RESULTANT SUM, WHICH SHOULD BE 0000, IS USED TO CHECK FOR ERROR. IF THE SUM IS 0000, THE LOOP IS REPEATED, IF SUM IS NOT 0000, PROGRAM STOPS AT ERROR WAIT WITH IAR REG EQUAL 002C AND SBR REG EQUAL 30F4. ACC DISPLAYS ERROR SUM.

### 5.2.5 CARD-05 PROGRAM

TESTS ADDRESSING OF LOCATIONS 0050 THROUGH OFFE. AFTER INITIAL SETUP, PROGRAM LOADS A WAIT INSTRUCTION AT LOCATION OFFF AND LOADS A BRANCH TO SYMBOLIC LOCATION ( CHECK ) IN LOCATION 0000. THE PROGRAM FORMS A CHECKSUM OF LOCATIONS 0014 THROUGH 004F. IF CHECKSUM IS IN ERROR, PROGRAM STOPS AT WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 001F AND STORAGE BUFFER INDICATING 30F5. ACCUMULATOR INDICATOR DISPLAYS ERROR CHECKSUM.

IF CHECKSUM IS CORRECT PROGRAM LOADS A SERIES OF BSI -1
INSTRUCTIONS IN LOCATIONS 005C THROUGH DFFE AND BRANCHES TO
LOCATION 0550 TO EXECUTE THE BSI -1 CHAIN, WHICH CAUSES EACH
LOCATION FROM 0050 THROUGH OFFE TO CONTAIN ITS OWN ADDRESS PLUS
ONE. THE PROGRAM THEN STOPS AT A WAIT INSTRUCTION WITH
INSTRUCTION ADDRESS INDICATING 1000 AND STORAGE BUFFER INDICATING
3005. UPON DEPRESSION OF RESET AND START PUSHBUTTONS PROGRAM
BRANCHES TO SYMBOLIC LOCATION ( CHECK).

THE ( CHECK) ROUTINE DETERMINES IF EACH LOCATION FROM 0050 THROUGH OFFE CONTAINS ITS DWN ADDRESS PLUS ONE, KEEPS COUNT OF LOCATIONS TESTED, AND STOPS AT WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 004C AND STORAGE BUFFER INDICATING 3005. ACCUMULATOR SHOULD INDICATE OFAF. IF THE CONTENTS OF A LOCATION ARE IN ERROR PROGRAM STOPS AT WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0038 AND STORAGE BUFFER INDICATING 30F5.

### 5.2.6 CARD-06 PROGRAM

THE CARD OF PROGRAM CHECKS THE 1131 CPU FOR CORRECT RESPONSE TO A SIMULATED DSW. THE SIMULATED DSW IS SET IN THE CONSOLE ENTRY SWITCHES AND CAN BE A VALID OR INVALID DSW. PORTIONS OF THE CARD OF PROGRAM DUPLICATE SECTIONS OF CARD 1 OF THE 1130 BASIC DIAGNOSTIC LOADER. THERE ARE THREE VALID DSW'S.

- A. 8003 BITS 0,14 AND 15 ON. COLUMN REQUESTS, BUSY, AND NOT READY.
- B. 0003 BITS 14 AND 15 ON. BUSY AND NOT READY.
- C. 0800 BIT 4 DN. END OF CARD (CP COMPLETE).

AFTER INITIAL SET UP, PROGRAM STOPS AT WAIT WITH IAR REG READING 002E AND SBR REG READING OF 3006, TO PERMIT OPERATOR TO ENTER A SIMULATED DSW IN THE CONSOLE ENTRY SWITCHES.

AFTER DEPRESSION OF START BUTTON, PROGRAM READS SETTING OF CONSOLE ENTRY SWITCHES INTO CORE AND THEN LOADS READING INTO ACC. IF THE READING IS 8003, THE PROGRAM REREADS THE SWITCHES AND STORES THE READING. PROGRAM BRANCHES BACK TO NORMAL WAIT 3006 TO PERMIT ENTRY OF DIFFERENT DSW IF DESIRED.

IF THE READING IS NOT 8003, PROGRAM CHECKS FOR READING OF 0003. IF TRUE, PROGRAM BRANCHES BACK TO NORMAL WAIT 3006 TO PERMIT ENTRY OF DIFFERENT DSW. IF 8003 READING IS NOT TRUE, PROGRAM READS CONSOLE SWITCHES AND CHECKS FOR ENTRY 0800. IF TRUE, PROGRAM ADDS 1 TO SUM WORD ( WHICH CONTAINS NUMBER OF )800 CONDITIONS ENCOUNTERED 0. PROGRAM THEN BRANCHES TO NORMAL WAIT 3006 TO PERMIT ENTRY OF NEW DSW. IF 0800 CONDITION IS NOT TRUE, PROGRAM STOPS AT ERROR WAIT WITH IAR REG READING OF 002D. ACC DISPLAYS ERROR DSW. PRESSING START BRANCHES PROGRAM TO NORMAL WAIT 3006 TO PERMIT ENTRY OF NEW DSW. IF IT IS DESIRED TO LOOP PROGRAM ON A SINGLE DSW, THE NORMAL WAIT THAT PERMITS ENTRY OF DSW'S, MAY BE CHANGED TO A NO OP

### 5.2.7 CARD-07 PROGRAM

PART ONE OF CARD O7 PROGRAM TESTS LOAD DOUBLE AND ADD DOUBLE INSTRUCTIONS. AT THE END OF THE TEST, PROGRAM STOPS AT NORMAL WAIT 3007, WITH IAR READING OF 0006. THE ACCUMULATOR AND ACCUMULATOR EXTENSION SHOULD READ FFFF, OR AN ERROR IS INDICATED. PRIOR TO DEPRESSING THE START KEY TO CONTINUE TO PART TWO, OPERATOR MUST TURN ON THE INTERRUPT DELAY SWITCH ON THE CE PANEL.

PART TWO OF CARD O7 PROGRAM IS DESIGNED TO PERMIT SCOPING OF THE X10 FUNCTIONS, WHILE CONTINUOUSLY READING CARDS WITH THE 1442. THE READ-CARD ROUTINE IS A DUPLICATE OF READ-CARD ROUTING IN CARD 1 OF THE 1130 BASIC DIAGNOSTIC LOADER.

AFTER INITIAL SET UP, PROGRAM CAUSES CARD TO FEED, RESET DSW, AND SENSE DSW. IT THEN CHECKS DSW FOR A 8003 INDICATION. IF TRUE, PROGRAM READS CARD COLUMN INTO LOCATION 0000 OR 0001. ODD NUMBERED COLUMNS ARE READ INTO LOCATION 0001. EVEN NUMBERED CARD COLUMNS ARE READ INTO LOCATION 0000. PROGRAM THEN LOADS ACC FROM LOCATION JUST LOADED, AND BRANCHES BACK TO RESET AND SENSE DSW, AND CHECK FOR 8003 DSW AGAIN.

IF DSW IS NOT 8003, THE PROGRAM CHECKS FOR A 0003 DSW. IF TRUE, PROGRAM BRANCHES BACK TO SENSE DSW AND CHECK FOR 8003 DSW. PROGRAM WILL REMAIN IN THIS CLOSED LOOP UNTIL THE 8003 CONDITION IS TRUE OR THE 0003 CONDITION IS NOT TRUE. WHEN THE PROGRAM FINDS THE 0003 CONDITION NOT TRUE, IT SENSES AND RESETS THE DSW AND CHECKS FOR 0800 CONDITION. IF TRUE, PROGRAM BRANCHES TO START ANOTHER CARD FEEDING AND REPEATS THE ENTIRE PROCESS. IF 0003 IS NOT TRUE, PROGRAM WILL AGAIN BRANCH TO START ANOTHER CARD FEEDING. THE OPERATOR HAS AN OPTION TO STOP THE PROGRAM AT LOCATION 002C BY INSERTING A WAIT.

### 6. APPENDIX

ONE-CARD DIAGNOSTIC PROGRAMS

### 6.1 DATA PATH TEST PROGRAM

THIS PROGRAM IS LOADED USING THE CONSOLE ENTRY SWITCHES AND TESTS THE ABILITY OF THE 1131 CPU TO TRANSFER ONES AND ZEROES BETWEEN THE FOLLOWING REGISTERS.

- A. FROM STORAGE BUFFER REGISTER TO ARITHMETIC FACTOR REGISTER TO ACCUMULATOR REGISTER TO STORAGE ADDRESS REGISTER TO INSTRUCTION ADDRESS REGISTER.
- B. FROM ACCUMULATOR REGISTER TO ACCUMULATOR EXTENSION REGISTER TO ACCUMULATOR REGISTER.
- C. FROM ACCUMULATOR REGISTER TO STORAGE BUFFER REGISTER.
- D. FROM INSTRUCTION ADDRESS REGISTER TO STORAGE BUFFER REGISTER.
- E. FROM INSTRUCTION ADDRESS REGISTER TO ACCUMULATOR REGISTER.

### 6.1.1 TEST PROCEDURE

- A. CLEAR STORAGE TO WAIT INSTRUCTION 33FF. SEE PARAGRAPH 3.3.6.
- B. ENTER THE FOLLOWING PROGRAM USING CONSOLE ENTRY SWITCHES.

NOTE

ALL NUMBERS SHOWN BELOW ARE IN HEXADECIMAL NOTATION.

LOCATION	CONTENT	MNEMONIC	COMMENTS
FFFA	0006	LD	LOAD ACCUMULATOR WITH CONTENTS OF LOCATION 0001.
FFFB	4480	BSII	STORE CONTENTS OF I COUNTER (FFFD) AT ADDRESS STORED IN LOCATION FFFD. SET I COUNTE TO THAT ADDRESS AND ADD ONE TO I COUNTER.
FFFC	FFFD		ADDRESS POSITION OF BSI I INSTRUCTION.
FFFD	FFFD		THIS IS THE ACTUAL BRANCH ADDRESS FOR THE THE BSI I INSTRUCTION AND IS REPLACED BY THE BSI I.
FFFE	D002	STO	STORE CONTENTS OF ACCUMULATOR AT LOCATION 0001 (SHOULD NOT CHANGE).
FFFF	COFC	1.D	LOAD ACCUMULATOR WITH CONTENTS OF LOCATION FFFC.
0000	4480	BSI I	STORE CONTENTS OF I COUNTER (0002) AT ADDRESS STORED IN LOCATION 0002. SET I COUNTER TO THAT ADDRESS AND ADD ONE TO I COUNTER.
0001	0002		THIS IS ADDRESS POSITION OF BSI I INSTRUCTION.
0002	0002		THIS IS THE ACTUAL BRANCH ADDRESS FOR THE BSI I INSTRUCTION AND IS REPLACED BY THE BSI I INSTRUCTION.
0003	DOF8	STO	STORE CONTENTS OF ACCUMULATOR AT LOCATION FFFC ( SHOULD NOT CHANGE ).
0004	70F5	MDX	BRANCH TO LOCATION FFFA.

- C. LOAD INSTRUCTION ADDRESS REGISTER WITH FFFA.
- D. STEP THROUGH PROGRAM IN SI MODE, CHECKING THAT PROGRAM LOOPS PROPERLY. ANY DATA-PATH ERROR SHOULD RESULT IN THE IMPROPER BRANCHING OF A BSI I INSTRUCTION AND STOPPING AT A WAIT. THE LOCATION BEFORE THE WAIT SHOULD CONTAIN THE CONTENTS OF INSTRUCTION ADDRESS REGISTER WHEN THE BRANCH OCCURRED. LOGICAL RECONSTRUCTION OF THE ERROR SHOULD ISOLATE A DATATRANSFER ERROR AND SUGGEST THE CIRCUIT CARD CAUSING THE ERROR.

NOTE

A BRANCH OUTSIDE OF THE PROGRAM INTO A CORE LOCATION LOADED WITH 33FF INDICATES AN ERROR HAS OCCURRED. SUBTRACT TWO FROM INSTRUCTION ADDRESS INDICATOR READING AND DISPLAY LOCATION. THE CONTENT OF LOCATION DISPLAYED IS THE INSTRUCTION ADDRESS REGISTER SETTING WHEN THE ERRONEOUS BRANCH OCCURRED. IF THE BRANCH WAS CAUSED BY A BST I INSTRUCTION FAILURE, THE LOCATION JUST CHECKED WILL HAVE 4 VALUE HIGHER BY ONE THAN THE ADDRESS OF THE SECOND WORD OF THE BSI I INSTRUCTION. IF THIS IS THE CASE, DISPLAY LOCATIONS WHERE PROGRAM IS STORED TO DETERMINE IF THE LOCATIONS HAVE CHANGED. THE ADDRESSES OF BSI I INSTRUCTIONS ARE STORED BY THE STO INSTRUCTIONS, AND THE LOCATIONS FFED AND 0002 ARE STORED BY THE BSI I INSTRUCTIONS. STATIC OR INTERMITTENT DATA TRANSFER ERRORS SHOULD BE READILY DE-TECTED BY THIS MEANS AND BE EASY TO ISOLATE BECAUSE OF THE UNIQUE FAILURE INDICATIONS.

ERRORS IN THE DATA PATH PROGRAM SHOULD BE CAUSED BY SINGLE BIT FAILURES, OR BY HALF-WORD FAILURES. THUS, DROPPED OR ADDED BITS CAN BE REFERENCED DIRECTLY TO A CIRCUIT CARD. SWAP INDICATED CIRCUIT CARD TO SEE IF FAILURE CHANGES.

THE Q, U, A, AND E REGISTERS' CIRCUIT CARDS ARE LOCATED IN ROW 4 OF THE CARD GATE, AND ARF INTERCHANGEABLE.

THE I, B, AND M REGISTERS' CIRCUIT CARDS ARE LOCATED IN ROW 6 OR THE CARD GATE, AND ARE INTERCHANGEABLE.

FAILING BIT- 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

COLUMN----- B C D E H

THE FOLLOWING CARDS CONTROL HALF-WORD TRANSFERS AND ARE INTERCHANGEABLE.

M4, M5, M7, L5, AND L6.

#### PROGRAM DESCRIPTION 6.1.2

THE LD INSTRUCTION AT LOCATION FFFA PERFORMS THE FUNCTION OF SET-TING THE ACCUMULATOR TO 0002 SO THAT WHEN THE FOLLOWING BSI I INSTRUCTION IS PERFORMED, A COMPLEMENT BIT PATTERN (FFFD) WILL BE SENT THROUGH THE ACCUMULATOR, THUS TESTING THAT THE ACCUMULATOR IS RETURNED TO 0002 AT THE END OF THE BSI I INSTRUCTION. THIS TEST IS ACCOMPLISHED BY STORING THE CONTENTS OF THE ACCUMULATOR BACK INTO LOCATION 0001 AFTER THE BSI I INSTRUCTION. THE SAME PHILOS -PHY IS USED DURING THE BSI I INSTRUCTION AT LOCATION 00000 BY SETTING THE ACCUMULATOR TO FFFD WHILE 0002 IS SENT THROUGH IT DURING THE BSI I INSTRUCTION. A FAILURE OF EITHER BSI I INSTRUCTION THAT AFFECTS THE ACCUMULATOR WILL CAUSE THE FOLLOWING BSI I INSTRUCTION TO TAKE ITS ADDRESS FROM THE WRONG LOCATION. THIS LOCATION WILL PROBABLY BE ONE OF THE CORE LOCATIONS LOADED WITH 33FF, THUS CAUSING THE PROGRAM TO STOP.

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM ONE-CARD DIAGNOSTIC PROGRAMS

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#### 6.2 ADD TEST PROGRAM

THIS PROGRAM HELPS LOCATE AN ADD FAILURE THAT CANNOT BE LOCATED WHEN RUNNING CARD 04 OF ONE-CARD PROGRAMS IN SI MODE, BECAUSE DE THE DYNAMIC NATURE OF THE PROBLEM. IF THE CONTENTS OF SUMPL AND SUMMI DO NOT ADD TO 0000, THERE HAS BEEN A FAILURE IN ADDING 0001 TO SUMPL, OR A FAILURE IN ADDING FFFF TO SUMMI. TO DETERMINE WHICH OF THE TWO SUMS IS IN ERROR. IT MUST BE ASSUMED THAT ONE OF THEM IS CORRECT IN ORDER TO ARRIVE AT THE VALUE OF THE OTHER PRIOR TO THE FAILURE, IN OTHER WORDS, TO DETERMINE VALUE OF SUMPL PRIOR TO FAILURE. IT MUST BE ASSUMED THAT PRESENT VALUE OF SUMMI IS CORRECT AND VICEVERSA. EXECUTE ADD TEST PROGRAM AS FOLLOWS,

- OBTAIN VALUE OF SUMPL PRIOR TO FAILURE BY DETERMINING TWO'S COMPLEMENT OF (SUMMI - FFFF).
- OBTAIN VALUE OF SUMMI PRIOR TO FAILURE BY DETERMINING TWO'S COMPLEMENT OF (SUMPL - 0001).
- LOAD FOLLOWING PROGRAM BY MEANS OF CONSOLE ENTRY SWITCHES.

ALL NUMBERS SHOWN BELOW ARE IN HEXADECIMAL NOTATION.

LOCATION	CONTENTS	MNEMONIC	COMMENTS
0000	VALUE OF PRIOR TO		WILL BE IN ACCUMULATOR WHEN ADD OCCURS.
0001	0001		WILL BE ADDED TO ACCUMULATOR DURING ADD.
0002	CORRECT ADDITION		USED TO CHECK ADD OPERATION.
0003	OOFC	LD	LOAD ACCUMULATION FROM LOCATION 0000.
0004	80FC	A	ADD CONTENTS OF LOCATION 0001 TO ACCUMULATOR.
0005	FOFC	EOR	EOR ACCUMULATOR WITH CORRECT ANSWER.
0006	4820	BSC Z	SKIP ON ZERO TO LOCATION 0008.
0007	3000	TIAW	WAIT ON ERROR HAS OCCURRED.
0008	6003	LDX	BRANCH TO LOCATION 0003.

- D. LOAD INSTRUCTION ADDRESS REGISTER WITH 0003.
- RUN PROGRAM IN RUN MODE. ANY ADD FAILURE WILL CAUSE PROGRAM TO STOP AT WAIT INSTRUCTION WITH INSTRUCTION ADDRESS INDICATING 0008.
- IF PROGRAM RUNS CONTINUOUSLY WITHOUT ERRORS.
  - 1. PRESS STOP PUSHBUTTON.
  - 2. LOAD LOCATION 0000 WITH VALUE OF SUMMI PRIOR TO ERROR.
  - 3. LOAD LOCATION 0001 WITH FFFF.

----- LAST PAGE ------

- LOAD LOCATION 0002 WITH CORRECT SUM OF SUMMI PLUS FFFF.
- 5. RUN AGAIN IN RUN MODE.

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IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

ONE-CARD DIAGNOSTIC PROGRAMS CARO OL

PART NO. 2191260 PAGE 1A

# ONE-CAPD DIAGNOSTIC PROGRAMS CARD 01

		ABS					000020
02BC		ORG	0				000030
		* TEST MOX AND	AOTIC	TRANSFER			000040
		* TEST	READ IN	ON PROG. LOAD	•		000050
0000	COSE	LD	<b>/0</b> 030				000060
0001 0	3001	WAIT	/0001	SEE ACC IS	FOFO		000070
0002 0	COSE	FD	/0031				000080
0003 0	3001	WAIT	/0001	SEE ACC IS	0 <b>80</b> F		000090
0004 0	703F	MDX	/0044				000100
0005 0	3051	WAIT	-15	**ERR., RESET			000110
0 4000	30F1	WAIT	-15	**FRR., RESET			000120
0007 0	50F1	WAIT	-15	**ERR., RESET			000130
0008 0	30F1 30F1	T I AW	-15	**ERR., RESET			000140
0004 0	30F1	WAIT Wait	-15 -15	** FRR., RESET ** FRR., RESET			000150
0008 0	30F1	WAIT	-15	**FRR., RESET		21	000160
00000	30F1	WAIT	-15	**ERR. RESET			000170 000180
0000	3051	WAIT	-15	**ERR., RESET		SI	000190
000F 0	30F1	WAIT	-15	**ERR., RESET			200200
000F 0	3071	WAIT	-15	**ERR., RESET			000210
0010 0	30F1	WAIT	-15	**ERR., RESET			000220
0011 0	30F1	WAIT	-15	**ERR., RESET			000230
0012 0	30F1	TIAW	-15	**FRR., RESET			000240
0013 0	30=1	WAIT	-15	**ERR., RESFT	THEN	\$1	000250
0014 0	30F1	WAIT	-15	**ERR., RESET	THEN	SI	000260
<b>0</b> 015 <b>0</b>	30F1	TIAW	-15	**ERR., RESET	THEN	\$1	000270
0016 0	30F1	WAIT	-15	**ERR., RESET	THEN	SI	000280
0017 0	30F1	WAIT	-15	**FRR., RESET			000290
0018 0	30F1	WAIT	-15	**ERR., RESET			000300
0019 0	37°]	WAIT	-15	**ERR., RESET		- •	000310
001A 0	30F1	WAIT	-15	**ERR., RESET			000320
0016 0	30F1 30F1	WAIT	-15	**ERR., RESET			000330
001C 0	_ <del>-</del>	WAIT	-15	**ERR., RESFT			000340
0016 O	30F1 30F1	WAIT	-15	**ERR., RESET			000350
001F 0	3051	WAIT WAIT	-15 -15	**ERR., RESET **ERR., RESET			000360
0020 0	30F1	WAIT	-15	**ERR., RESET			000370 000380
0021 0	30F1	WAIT	-15	**FRR., RESET			000390
0022 0	30F1	WAIT	-15	**ERR., RESET			000400
0023 0	37F1	WAIT	-15	**ERR., RESET			000410
0024 0	30F]	WAIT	-15	**FRR., RESET			000420
0025 0	10F1	WAIT	-15	**ERR., RESET	THEN	SI	000430
0026 0	30F1	#AIT	-15	**ERR., RESET			000440
0027 0	30F]	WAIT	-15	**ERR., RESET	THEN	SI	000450
0023 0	10F1	MAIT	-15	**ERR., RESET	THEN	<b>S1</b>	000460
0029 0	30F1	WAIT	-15	**ERR., RESET			000470
002A 0	30F1	WAIT	-15	**ERR., RESET			000480
0028 0	3751	WAIT	-15	**FRR., RESET			000490
0030 0	30F1	WAIT	-15	**ERR., RESET			000500
002F 0	30F1 30F1	WAIT	-15	**ERR., RESET			000510
002F 0	30F1	WAIT WAIT	-15 -15	**ERR., RESET			000520
0030 0	FOFO	DC	/F0F0	**ERR., RESET	INCH	31	000530
0031 0	NOF	DC	/080F				000540 000550
0032 0	30F1		-15	**ERR., RESET	THEN	· C1	000560
0033 0	30F1		-15	**FRR., RESET			000570
0034 0	30F1	WAIT	-15	**ERR., RESET			000580
0035 0	37F ]	TIAW	-15	**ERR., RESET			000590
0036 0	30F1	WAIT	-15	**ERR., RESET			000600
0037 0	30F1	TIAW	-15	**ERR., RESET	THEN	SI	000610
0038 0	30F1	WAIT	-15	**ERR., RESET	THEN	SI	.000620
0039 0	30F1	WAIT	-15	**ERR., RESET			000630
003A 0	30F1	WAIT	-15	**ERR., RESET			000640
0038 0	37F1	WAIT	-15	**FRR., RESET			000650
0030 0	30F1	WAIT	-15	**ERR., RESET	THEN	21	000660
003D 0	37F1	WAIT	-15	**ERR., RESET	IHEN	21 .	000670
003E 0	7000 · · · ·	MDX MDX	* /004D				000680
903r Q		PH/A	,0070				000690
						•	

0040 0	30F1	WAIT	-15	**ERR., RESET THEN	I S1	000700
0041 0	30F1	WAIT	-15	**ERR., RESET THEN	l Si	000710
0042 0	30F1	WAIT	-15	**ERR., RESET THEN	SI	000720
0043 0	30F1	TIAW	-15	**ERR. , RESET THEN		000730
0044 0	70F9 ,	MDX	/003E	•	•	000740
0045 0	3 <b>0</b> F1	WAIT	-15	**ERR., RESET THEN	l S1	000750
0046 0	30F1	WAIT	-15	**ERR., RESET THEN		000760
0047 0	30 F 1	WAIT	-15	**ERR., RESET THEN		000770
0048 0	30F1	WAIT	-15	**ERR., RESET THEN		000780
0049 ი	30F1	WAIT	-15	**ERR. RESET THEN		000790
004A 0	30F1	WAIT	-15	**ERR., RESET THEN		008000
004B 0	30F1	WAIT	-15	**ERR., RESET THEN		000810
004C 0	30F1	WAIT	-15	** ERP. , RESET THEN		000820
0040 0	3001	WAIT	/0001	STOP HERE INDICA		000830
004E 0	2 <b>0</b> 00	DC	/2000	HEXIDECIMAL NUMB		000840
004F 0	1000	DC	/1000	HEXIDECIMAL NUMB		000850
0050	0000	END	0		·· •	000860

ONE-CARD DIAGNOSTIC PROGRAMS CARD 01

CROSS REFERENCE LISTING

SYMBOL VALUE REFERENCES

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ONE-CARD DIAGNOSTIC PROGRAMS
CARD 02

028E			ARC			000890
1   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100	0200			10000		
0000 0 003 0 003 A 7003F INST. FROM LOC. 70000 000930 0002 0 803 A 7003F INST. FROM LOC. 70000 000930 0002 0 803B A 7003F INST. FROM LOC. 7003E SHOULD 000940 00040 0 803B A 7003F INST. FROM LOC. 7003E SHOULD 000940 00040 0 803B A 7003F INST. FROM LOC. 7003E SHOULD 000940 00060 0 8039 A 7003F INST. FROM LOC. 7003E SHOULD 000940 00060 0 8037 A 7003F INST. PLANSER MEDING 000940 00070 0 8037 A 7003F INST. PLANSER MEDING 000940 00070 0 8037 A 7003F INST. PLANSER MEDING 000940 00000 0 8035 A 7003F 70040 000940 00000 0 8035 A 7003F PARTICLE NOT PLANSER MEDING 000940 00000 0 8033 A 7003F PARTICLE NOT PLANSER 000940 00000 0 8030 A 7003F PARTICLE NOT PLANSER 000940 00000 0 8030 A 7003F PARTICLE NOT PLANSER 000940 00000 0 8030 A 7003F PARTICLE NOT PLANSER 000940 00000 0 8030 A 7003F PARTICLE NOT PLANSER 000940 00010 0 802E A 7003F FROM 70000 0 SEE 001880 00010 0 802E A 7003F FROM 70000 0 SEE 001880 00010 0 802E A 7003F FROM 70000 0 SEE 001880 00010 0 802C A 7003F FROM 70000 0 SEE 001880 00010 0 802C A 7003F INST. PLANSER 000180 00110 0 802C A 7003F INST. PLANSER 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00180 00	02 B.C					
0001 0 8030 A						
0003 0 8036 A 7003F TO LOC. 7003E. TOTAL 000940 0003 0 8039 A 7003F BE 7003E. TOTAL 000950 0004 0 8039 A 7003F BE 7003E. TOTAL 000950 0006 0 8039 A 7003F BE 7003E. 7003F 000950 0006 0 8039 A 7003F L. DISPLAY LOCS. 7003F 000950 0006 0 8039 A 7003F L. DISPLAY LOCS. 7003F 000950 0006 0 8035 A 7003F 70041 001000 0004 0 8035 A 7003F 70040 001010 00040 0 8035 A 7003F 70040 001010 00040 0 8033 A 7003F 70040 001010 00040 0 8033 A 7003F 70040 001010 00040 0 8033 A 7003F FOLLOWING CARDS 001040 0000 0 8031 A 7003F FOLLOWING CARDS 001040 0000 0 8031 A 7003F FOLLOWING CARDS 001040 0000F 0 802F A 7003F FROM 70000 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F MINER LOT ON TOUTON 00110 0 802F A 7003F M		-				
0004 0 803A A			Δ.	/003F		900930
0000 0 8039 A 7003F BE 7003F. 000970 0006 0 8039 A 7003F IF ANNER WRONG 000970 0006 0 8037 A 7003F IF ANNER WRONG 000970 0008 0 8036 A 7003F 70041 001000 0000 0 8035 A 7003F 70041 001000 0000 0 8033 A 7003F 70041 001000 0000 0 8033 A 7003F 70041 001000 0000 0 8031 A 7003F 70041 001000 0000 0 8031 A 7003F 90040 FRENT 001050 0000 0 8031 A 7003F 9004 FRENT 001050 0000 0 8036 A 7003F 9004 FRENT 001050 0000 0 8036 A 7003F 9004 FRENT 001050 0011 0 802E A 7003F 9004 FRENT 001070 0010 0 802E A 7003F 9004 FRENT 001070 0011 0 802D A 7003F 9004 FRENT 001070 0011 0 802D A 7003F 9004 FRENT 001070 0012 0 802C A 7003F 9004 FRENT 001070 0013 0 802D A 7003F 9004 FRENT 001070 0015 0 802C A 7003F 9004 FRENT 001070 0016 0 802A A 7003F 9004 FRENT 001070 00170 001050 902B A 7003F 9004 FRENT 001070 0018 0 802B A 7003F 9004 FRENT 001070 0019 0 802B A 7003F 9004 FRENT 001070 0019 0 802B A 7003F 9004 FRENT 001070 0019 0 802B A 7003F 9004 FRENT 001070 0010 0 802B A 7003F 9004 PRENT 001070 0010 0 802B A 7003F 9004 PRENT 001070 0010 0 801B A 7003F		803C	A	/003F	TO LOC. /OO3E. TOTAL	000940
0006 0 8039 A	0003 0	803B	Α	/003F	AT WAIT AT /003E SHOULD	000950
0006 0 8039 A	0004 0	803A	A	/003F	BE /003E.	000960
0000	0005 0	8039	Δ		IF ANSWER WRONG	000970
0007 0 8037 A						
0.008   0.8036						
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0000 0         8033         A         /003F         2. LOAD OK. CHECK THE         901030           0000 0         8031         A         /003F         FOLLOWING CARDS         901040           0000 0         8030         A         /003F         BY SWAP + RE-RUN         001050           0000 0         802F         A         /003F         CR SINGLE INSTRUCTION         001070           0010 0         802E         A         /003F         FROW 70000 + SEE         001080           0011 0         802C         A         /003F         I COUNTER.         0011090           0012 0         802C         A         /003F         I COUNTER.         0011090           0012 0         802C         A         /003F         I COUNTER.         0011090           0013 0         802B         A         /003F         I COUNTER.         0011090           0013 0         802C         A         /003F         I COUNTER.         0011100           0015 0         802B         A         /003F         I COUNTER.         0011100           0017 0         802B         A         /003F         I COUNTER.         0011100           0018 0         8026         A         /003					70000.	
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0006	0000	8032	Α	/003F	FOLLOWING CARDS	001040
000F 0 802F A 7003F OR SINGLE INSTRUCTION 001070 0011 0 802C A 7003F FROM 70000 + SEE 001080 0011 0 802C A 7003F HWHEN ACC. NOT EQU. 001090 0012 0 802C A 7003F I COUNTER. 001110 0014 0 802A A 7003F 001120 0015 0 802B A 7003F 001130 0016 0 802B A 7003F 001130 0017 0 802T A 7003F 001150 0018 0 802C A 7003F 001150 0018 0 802C A 7003F 001150 0018 0 802C A 7003F 001150 0019 0 802C A 7003F 001170 0010 0 802C A 7003F 001170 0011 0 802C A 7003F 001170 0011 0 802C A 7003F 001120 0011 0 802C A 7003F 001200 0011 0 802C A 7003F 001200 0011 0 802C A 7003F 001220 0011 0 801C A 7003F 001220 002C 0 801C A 7003F 001220 0022 0 801C A 7003F 001280 0022 0 801C A 7003F 001280 0022 0 801C A 7003F 001300 0027 0 801F A 7003F 001300 0028 0 8016 A 7003F 001300 0028 0 8016 A 7003F 001300 0029 0 8016 A 7003F 001330 0020 0 8010 A 7003F 001330 0020 0 8010 A 7003F 001330 0020 0 8000 A 7003F 001400 0031	000D 0	8031	. A	/003F	BY SWAP + RE-RUN	001050
0010 0 802E A /003F FRDM 70000 + SEE 001080 0011 0 802B A /003F HNEW ACC. NOT EQU. 001090 0012 0 802C A /003F I COUNTER. 001110 0014 0 802A A /003F 001120 0015 0 802P A /003F 001120 0015 0 802P A /003F 001120 0016 0 802B A /003F 001120 0017 0 8027 A /003F 001120 0018 0 802B A /003F 001120 0010 0 802C A /003F 001120 0010 0 802C A /003F 001120 0011 0 802C A /003F 001120 0011 0 802C A /003F 001120 0011 0 802C A /003F 001200 0011 0 802C A /003F 0012200 0012 0 801B A /003F 0012200 0012 0 801B A /003F 0012200 0022 0 801C A /003F 0012200 0022 0 801C A /003F 0012200 0022 0 801B A /003F 0012300 0022 0 801B A /003F 0013300 0022 0 801B A /003F 0013400 0033 0 800B A /003F 0014400 0033 0 800B A /003F 0014500 0034 0 800C A /003F 0014500 0035 0 800C A /003F 0014500 0035 0 800C A /003F 0014500 0035 0 800C A /003F 0014500 0036 0 800B A /003F 0014500 0037 0 800C A /003F 0014500 0038 0 800C A /003F 0014500 0039 0 8	000E 0	8030	· A	/003F	QUAD + IBM.	001060
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001F 0         8020         A         /003F         001220           001F 0         801F A         A         /003F         001230           0020 0         801E A         A         /003F         001240           0021 0         801D A         A         /003F         001250           0022 0         801C A         A         /003F         001260           0023 0         801B A         A         /003F         001270           0024 0         801A A         A         /003F         001280           0025 0         801B A         A         /003F         001290           0026 0         801B A         A         /003F         001300           0027 0         8017 A         A         /003F         001300           0027 0         8017 A         A         /003F         001320           0029 0         8015 A         A         /003F         001320           0029 0         8015 A         A         /003F         001320           0029 0         8015 A         A         /003F         001320           0020 0         8011 A         A         /003F         001320           0020 0         8011 A						
001F 0 801F         A /003F         001230           0020 0 801E         A /003F         001240           0021 0 801D         A /003F         001250           0022 0 801C         A /003F         001260           0023 0 801B         A /003F         001270           0024 0 801A         A /003F         001280           0025 0 8019         A /003F         001290           0026 0 8018         A /003F         001300           0027 0 8017         A /003F         001310           0028 0 8016         A /003F         001320           0029 0 8015         A /003F         001320           0020 0 8014         A /003F         001320           0020 0 8015         A /003F         001340           0020 0 8015         A /003F         001340           0020 0 8013         A /003F         001350           0020 0 8011         A /003F         001350           0020 0 8011         A /003F         001370           0022 0 800F         A /003F         001380           0022 0 800F         A /003F         001400           0031 0 800F         A /003F         001400           0032 0 800C         A /003F         001400 <tr< th=""><td></td><td></td><td></td><td></td><td></td><td></td></tr<>						
0020 0 801E A /003F 001250 0021 0 801D A /003F 001250 0022 0 801B A /003F 001260 0023 0 801B A /003F 001270 0024 0 801A A /003F 001280 0025 0 8019 A /003F 001290 0026 0 8018 A /003F 001300 0027 0 8017 A /003F 001310 0028 0 8016 A /003F 001310 0028 0 8016 A /003F 001320 0029 0 8015 A /003F 001330 002A 0 8014 A /003F 001330 002A 0 8014 A /003F 001330 002C 0 8012 A /003F 001340 002D 0 8011 A /003F 001360 002D 0 8011 A /003F 001380 002F 0 800F A /003F 001380 002F 0 800F A /003F 001390 0030 0 800F A /003F 001390 0031 0 800D A /003F 001390 0030 0 800F A /003F 001390 0031 0 800D A /003F 001400 0033 0 800B A /003F 001400 0037 0 800C A /003F 001400 0038 0 800B A /003F 001450 0036 0 8008 A /003F 001450 0036 0 8008 A /003F 001450 0037 0 8007 A /003F 001450 0038 0 8006 A /003F 001450 0039 0 8005 A /003F 001450 0039 0 8005 A /003F 001450 0030 0 8000 A /003F 001500 0030 0 8000 A /003F 001550 0036 0 8000 A /003F 001550 0036 0 8000 A /003F 001550 0036 0 8000 A /003F 001550						
0021 0 801D         A /003F         001250           0022 0 801C         A /003F         001260           0023 0 801B         A /003F         001270           0024 0 801A         A /003F         001280           0025 0 8019         A /003F         001290           0026 0 801B         A /003F         001300           0027 0 8017         A /003F         001310           0028 0 8016         A /003F         001320           0029 0 8015         A /003F         001330           002A 0 8014         A /003F         001340           002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001360           002D 0 8011         A /003F         001370           002E 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800F         A /003F         001400           0031 0 800D         A /003F         001400           0032 0 800C         A /003F         001400           0033 0 800B         A /003F         001420           0036 0 800B         A /003F         001450 <tr< th=""><td></td><td>-</td><td></td><td></td><td>•</td><td></td></tr<>		-			•	
0022 0         801C         A         /003F         001260           0023 0         801B         A         /003F         001270           0024 0         801A         A         /003F         001280           0025 0         8019 0         A         /003F         001290           0026 0         8018 0         A         /003F         001300           0027 0         8017 0         A         /003F         001310           0028 0         8016 0         A         /003F         001320           0029 0         8015 0         A         /003F         001330           0020 0         8014 0         A         /003F         001340           0020 0         8013 0         A         /003F         001350           0020 0         8011 0         A         /003F         001350           0020 0         8011 0         A         /003F         001360           002F 0         8010 1         A         /003F         001390           002F 0         800F 0         A         /003F         001400           0031 0         800F 0         A         /003F         001400           0032 0         800C 0 <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td>	-	-				
0023 0 8018         A /003F         001270           0024 0 801A         A /003F         001280           0025 0 8019         A /003F         001290           0026 0 8018         A /003F         001300           0027 0 8017         A /003F         001310           0028 0 8016         A /003F         001320           0029 0 8015         A /003F         001330           002A 0 8014         A /003F         001340           002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001370           002E 0 8011         A /003F         001370           002E 0 8010         A /003F         001370           002E 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800E         A /003F         001400           0031 0 800B         A /003F         001400           0033 0 800B         A /003F         001400           0034 0 800A         A /003F         001450           0035 0 800B         A /003F         001450           0036 0 800B         A /003F         001450           0037 0 8007         A /003F         001450 <tr< th=""><td></td><td></td><td></td><td></td><td></td><td></td></tr<>						
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0025 0 8019 A /003F 01300 0027 0 8018 A /003F 01310 0028 0 8016 A /003F 01320 0028 0 8016 A /003F 01320 0029 0 8015 A /003F 01330 002A 0 8014 A /003F 01330 002A 0 8013 A /003F 01350 002C 0 8012 A /003F 01360 002D 0 8011 A /003F 01370 002E 0 8010 A /003F 01370 002E 0 8010 A /003F 01390 0030 0 800E A /003F 001390 0030 0 800E A /003F 001400 0031 0 800D A /003F 001400 0031 0 800D A /003F 001400 0032 0 800C A /003F 001400 0033 0 800B A /003F 001400 0034 0 800A A /003F 001420 0035 0 800B A /003F 001420 0036 0 800B A /003F 001440 0037 0 8007 A /003F 001440 0038 0 8008 A /003F 001440 0039 0 8007 A /003F 001450 0039 0 8006 A /003F 001450 0039 0 8007 A /003F 001450 0039 0 8007 A /003F 001450 0039 0 8007 A /003F 001450 0039 0 8006 A /003F 001450 0039 0 8007 A /003F 001450 0039 0 8006 A /003F 001450 0039 0 8007 A /003F 001450 0038 0 8008 A /003F 001450 0039 0 8007 A /003F 001500 0038 0 8008 A /003F 001500 0038 0 8007 A /003F 001500		801B	A	/003F		
0026 0 8018	0024 0	801A	A	/003F		001280
0027 0 8017	0025 0	8019	A	/003F		001290
0028 0 8016         A /003F         001320           0029 0 8015         A /003F         001330           002A 0 8014         A /003F         001340           002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001370           002E 0 8010         A /003F         001370           002F 0 800F         A /003F         001390           0030 0 800E         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001430           0034 0 800A         A /003F         001450           0035 0 8009         A /003F         001450           0036 0 8008         A /003F         001460           0037 0 8007         A /003F         001460           0039 0 8005         A /003F         001460           0039 0 8005         A /003F         001490           0038 0 8006         A /003F         001490           0038 0 8007         A /003F         001500           0038 0 8007         A /003F         001500 <tr< th=""><td>0026 0</td><td>8018</td><td>A</td><td>/003F</td><td></td><td>001300</td></tr<>	0026 0	8018	A	/003F		001300
0029 0 8015         A /003F         001330           002A 0 8014         A /003F         001340           002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001370           002F 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800F         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001420           0034 0 800A         A /003F         001440           0035 0 800B         A /003F         001440           0037 0 800B         A /003F         001440           0037 0 800B         A /003F         001460           0037 0 800B         A /003F         001460           0037 0 800B         A /003F         001470           0038 0 800B         A /003F         001470           0039 0 800B         A /003F         001490           0039 0 800B         A /003F         001500           0038 0 800B         A /003F         001500 <tr< th=""><td>0027 0</td><td>8017</td><td>A</td><td>/003F</td><td></td><td>001310</td></tr<>	0027 0	8017	A	/003F		001310
0029 0 8015         A /003F         001330           002A 0 8014         A /003F         001340           002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001370           002F 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800F         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001420           0034 0 800A         A /003F         001440           0035 0 800B         A /003F         001440           0037 0 800B         A /003F         001440           0037 0 800B         A /003F         001460           0037 0 800B         A /003F         001460           0037 0 800B         A /003F         001470           0038 0 800B         A /003F         001470           0039 0 800B         A /003F         001490           0039 0 800B         A /003F         001500           0038 0 800B         A /003F         001500 <tr< th=""><td>0028 0</td><td>8016</td><td>. Д</td><td>/003F</td><td></td><td>001320</td></tr<>	0028 0	8016	. Д	/003F		001320
002A 0 8014         A /003F         001340           002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001370           002F 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800E         A /003F         001400           0031 0 800D         A /003F         001400           0031 0 800B         A /003F         001420           0033 0 800B         A /003F         001430           0034 0 800A         A /003F         001440           0035 0 800B         A /003F         001450           0036 0 800B         A /003F         001460           0037 0 8007         A /003F         001460           0039 0 8006         A /003F         001460           0039 0 8007         A /003F         001470           0038 0 8006         A /003F         001490           0038 0 8006         A /003F         001490           0038 0 8007         A /003F         001500           0038 0 8001         A /003F         001500           0039 0 8001         A /003F         001500 <tr< th=""><td>-</td><td></td><td></td><td></td><td></td><td>001330</td></tr<>	-					001330
002B 0 8013         A /003F         001350           002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001370           002F 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800E         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001420           0034 0 800A         A /003F         001440           0035 0 8009         A /003F         001450           0036 0 8008         A /003F         001450           0037 0 8007         A /003F         001460           0039 0 8005         A /003F         001470           0038 0 8006         A /003F         001490           003A 0 8004         A /003F         001490           003B 0 8003         A /003F         001500           003C 0 8002         A /003F         001500           003F 0 3002         WAIT /0002SEE ACC. IS 003E         001540           003F 0 3001         DC /0001         CONSTANT ADDED AT 0-3D         001550						
002C 0 8012         A /003F         001360           002D 0 8011         A /003F         001370           002F 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800F         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001420           0033 0 800B         A /003F         001430           0034 0 800A         A /003F         001450           0035 0 800B         A /003F         001450           0036 0 800B         A /003F         001450           0037 0 8007         A /003F         001470           0038 0 8006         A /003F         001470           0038 0 8006         A /003F         001490           0039 0 8003         A /003F         001490           0038 0 8003         A /003F         001500           003B 0 8001         A /003F         001500           003F 0 3002         WAIT /0002SEE ACC. IS 003E         001540           003F 0 3002         WAIT /0002SEE ACC. IS 003E         001550		-				
002D 0 8011         A /003F         001370           002F 0 8010         A /003F         001380           002F 0 800F         A /003F         001390           0030 0 800F         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001420           0033 0 800B         A /003F         001430           0034 0 800A         A /003F         001440           0035 0 8009         A /003F         001460           0037 0 8007         A /003F         001460           0038 0 8006         A /003F         001470           0038 0 8006         A /003F         001490           0039 0 8005         A /003F         001490           0030 0 8007         A /003F         001500           0030 0 8007         A /003F         001500           0030 0 8001         A /003F         001520           0037 0 8001         A /003F         001520           0037 0 8001         A /003F         001530           0037 0 8001         A /003F         001530           0038 0 8003         A /003F         001530 <tr< th=""><td>-</td><td></td><td></td><td></td><td></td><td></td></tr<>	-					
002E         0         8010         A         /003F         001380           002F         0         800F         A         /003F         001390           0030         0         800E         A         /003F         001400           0031         0         800D         A         /003F         001410           0032         0         800C         A         /003F         001420           0033         0         800B         A         /003F         001430           0034         0         800A         A         /003F         001430           0034         0         800A         A         /003F         001450           0036         0         800B         A         /003F         001460           0037         0         800B         A         /003F         001470           0038         0         8006         A         /003F         001480           0039         0         8005         A         /003F         001490           0038         0         8003         A         /003F         001500           0038         0         8007         A         /003F						
002F 0 800F         A /003F         001390           0030 0 800E         A /003F         001400           0031 0 800D         A /003F         001410           0032 0 800C         A /003F         001420           0033 0 800B         A /003F         001420           0034 0 800A         A /003F         001440           0035 0 800B         A /003F         001450           0036 0 800B         A /003F         001460           0037 0 8007         A /003F         001460           0037 0 8007         A /003F         001470           0038 0 8006         A /003F         001490           003A 0 8004         A /003F         001490           003B 0 8003         A /003F         001500           003C 0 8002         A /003F         001500           003F 0 3002         WAIT /0002        SEE ACC- IS 003E         001540           003F 0 0001         DC /0001         CONSTANT ADDED AT 0-3D         001550						
0030 0 800E       A /003F       001400         0031 0 800D       A /003F       001410         0032 0 800C       A /003F       001420         0033 0 800B       A /003F       001430         0034 0 800A       A /003F       001440         0035 0 8009       A /003F       001450         0036 0 8008       A /003F       001460         0037 0 8007       A /003F       001470         0038 0 8006       A /003F       001480         0039 0 8005       A /003F       001490         0038 0 8003       A /003F       001500         0038 0 8003       A /003F       001500         003C 0 8002       A /003F       001520         003F 0 3002       WAIT /0002      SEE ACC- IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550		-				
0031 0 8000       A /003F       001410         0032 0 800C       A /003F       001420         0033 0 800B       A /003F       001430         0034 0 800A       A /003F       001440         0035 0 8009       A /003F       001450         0036 0 8008       A /003F       001450         0037 0 8007       A /003F       001470         0038 0 8006       A /003F       001480         0039 0 8005       A /003F       001490         0038 0 8003       A /003F       001500         0038 0 8003       A /003F       001510         003C 0 8002       A /003F       001520         003F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550			_	10005		
0032 0 800C A /003F 001420 0033 0 800B A /003F 001430 0034 0 800A A /003F 001440 0035 0 8009 A /003F 001450 0036 0 800B A /003F 001460 0037 0 8007 A /003F 001470 0038 0 8006 A /003F 001470 0038 0 8006 A /003F 001490 0039 0 8005 A /003F 001490 0030 0 8003 A /003F 001500 0038 0 8003 A /003F 001550 0037 0 8007 A /003F 001520 0038 0 8007 A /003F 001550						
0033 0 8008         A         /003F         001430           0034 0 800A         A         /003F         001440           0035 0 8009         A         /003F         001450           0036 0 8008         A         /003F         001460           0037 0 8007         A         /003F         001470           0038 0 8006         A         /003F         001480           0039 0 8005         A         /003F         001490           0038 0 8003         A         /003F         001500           0038 0 8003         A         /003F         001510           0030 0 8001         A         /003F         001520           003F 0 3002         WAIT         /0002        SEE ACC. IS 003E         001540           003F 0 0001         DC         /0001         CONSTANT ADDED AT 0-3D         001550						
0034 0 800A       A /003F       001440         0035 0 8009       A /003F       001450         0036 0 8008       A /003F       001460         0037 0 8007       A /003F       001470         0038 0 8006       A /003F       001480         0039 0 8005       A /003F       001490         0038 0 8003       A /003F       001500         0038 0 8003       A /003F       001510         0030 0 8002       A /003F       001520         0037 0 8001       A /003F       001530         0037 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         0037 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550						
0035 0 8009         A /003F         001450           0036 0 8008         A /003F         001460           0037 0 8007         A /003F         001470           0038 0 8006         A /003F         001480           0039 0 8005         A /003F         001490           0038 0 8003         A /003F         001500           0038 0 8003         A /003F         001510           0030 0 8002         A /003F         001520           0037 0 8001         A /003F         001530           003F 0 3002         WAIT /0002        SEE ACC. IS 003E         001540           003F 0 0001         DC /0001         CONSTANT ADDED AT 0-3D         001550			A			
0036 0 8008         A         /003F         001460           0037 0 8007         A         /003F         001470           0038 0 8006         A         /003F         001480           0039 0 8005         A         /003F         001490           0038 0 8004         A         /003F         001500           0038 0 8003         A         /003F         001510           003C 0 8002         A         /003F         001520           003D 0 8001         A         /003F         001530           003F 0 3002         WAIT         /0002        SEE ACC. IS 003E         001540           003F 0 0001         DC         /0001         CONSTANT ADDED AT 0-3D         001550	0034 0	800A	Α Α	/003F		001440
0036 0 8008       A /003F       001460         0037 0 8007       A /003F       001470         0038 0 8006       A /003F       001480         0039 0 8005       A /003F       001490         0038 0 8004       A /003F       001500         0038 0 8003       A /003F       001510         003C 0 8002       A /003F       001520         003D 0 8001       A /003F       001530         003F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550	0035 0	8009	A	/003F		001450
0037 0 8007       A /003F       001470         0038 0 8006       A /003F       001480         0039 0 8005       A /003F       001490         003A 0 8004       A /003F       001500         003B 0 8003       A /003F       001510         003C 0 8002       A /003F       001520         003D 0 8001       A /003F       001530         003F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550				/003F		001460
0038 0 8006         A /003F         001480           0039 0 8005         A /003F         001490           003A 0 8004         A /003F         001500           003B 0 8003         A /003F         001510           003C 0 8002         A /003F         001510           003D 0 8001         A /003F         001520           003F 0 3002         WAIT /0002        SEE ACC. IS 003E         001540           003F 0 0001         DC /0001         CONSTANT ADDED AT 0-3D         001550						
0039 0 8005       A /003F       001490         003A 0 8004       A /003F       001500         003B 0 8003       A /003F       001510         003C 0 8007       A /003F       001520         003D 0 8001       A /003F       001530         003F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550						
003A 0 8004       A /003F       001500         003B 0 8003       A /003F       001510         003C 0 8002       A /003F       001520         003D 0 8001       A /003F       001530         003F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550						
0038 0 8003       A /003F       001510         003C 0 8002       A /003F       001520         003D 0 8001       A /003F       001530         003F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         003F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550						
Q03C 0 8002       A /003F       001520         Q03D 0 8001       A /003F       001530         Q03F 0 3002       WAIT /0002      SEE ACC. IS 003E       001540         Q03F 0 0001       DC /0001       CONSTANT ADDED AT 0-3D       001550						
003D 0 8001 A /003F 001530 003F 0 3002 WAIT /0002SEE ACC. IS 003E 001540 003F 0 0001 DC /0001 CONSTANT ADDED AT 0-3D 001550						
003F 0 3002 WAIT /0002 SEE ACC. IS 003E 001540 003F 0 0001 DC /0001 CONSTANT ADDED AT 0-3D 001550					• 1	
003F 0 0001 DC /0001 CONSTANT ADDED AT 0-3D 001550						
0040 0 F8FF DC /F8FF CONSTANT TO CHECK CRD READ 001560	003F 0	0001			·	
	0040 0	FBFF	DC	/F 8F F	CONSTANT TO CHECK CRD READ	001560

DATE Q1MAY66 EC NO. 4154908 PROG ID 03A5-1 PAGE 2A IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191260

PART NO. 2191260 PAGE 3A

ONE-CARD DIAGNOSTIC PROGRAMS

CARD 02

001570 001580 001590 BSS DC DC END 0041 000D 004E 0 2000 004F 0 0800 0050 0000 /2000 /0800 HEXIDECIMAL NUMBER O HEXIDECIMAL NUMBER 2 001600 0

ONE-CARD DIAGNOSTIC PROGRAMS CARD 02

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

CROSS REFERENCE LISTING

REFERENCES SYMBOL VALUE

DATE EC NO. 01MAY66 415490B

PART NO. 2191260

## ONE-CARD DIAGNOSTIC PROGRAMS CARD 03

		ABS	001630
028C		ORG /0000	001640
		* CHECK BSC Z, SRA 1 , AND EOR.	001650
		* LOAD CARD AND RUN PROGRAM. PROGRAM SHOULD STOP	001660
		* AT WAITS FOLLOWED BY FOR SEEING THAT THE REGS.	001670
		* SHOWN ARE CORRECT, DIFFERENCES INDICATE ERRORS.	001680
		* WAITS FOLLOWED BY ** OCCUR ONLY ON ERRORS.	001690
		* THE FIRST TEST IS OF SRA 1 AND BSC 2.	001700
		* A DNE IS PLACED INTO THE BIT ZERO POSITION AND	001710 001720
		* TESTED AT EACH TIME BY A BSC Z WHICH SHOULD NOT	001720
0000	C 0.3 C	* SKIP THE ACC. IS SHOWN AFTER EACH SRA 1.	001740
0000 0	C 0 3 C	LO K8000 8000 BSC Z SHOULD NOT SKIP	001750
0001 0	4820		001760
0002 0	1801 4820	SRA 1 4000 BSC Z SHOULD NOT SKIP	001770
0004 0	1801	SRA 1 2000	001780
0005 0	4820	BSC Z SHOULD NOT SKIP	001790
0 0000	1801	SRA 1 1000	001800
0007 0	4820	BSC Z SHOULD NOT SKIP	001810
0008 0	1801	SRA 1 0800	001820
0009 0	4820	BSC Z SHOULD NOT SKIP	001830
000A 0	1801	SRA 1 0400	001840
000B 0	4820	BSC Z SHOULD NOT SKIP	001850
0000 0	1801	SRA 1 0200	001860
0000 0	4820	BSC Z SHOULD NOT SKIP	001870
000F 0	1801	SRA 1 0100	001880
000F 0	4820	BSC Z SHOULD NOT SKIP	001890
0010 0	1801	SRA 1 0080	001900
0011 0	4820	BSC Z SHOULD NOT SKIP	001910
0012 0	1801	SRA 1 0040	001920
0013 0	4820	BSC Z SHOULD NOT SKIP	001930
0014 0	1301	SRA 1 0020	001940
0015 0	4820	BSC Z SHOULD NOT SKIP	001950
0016 0	1801	SRA 1 0010	001960
0017 0	4820	BSC Z SHOULD NOT SKIP	001970
0018 0	1801	SR4 1 0009	001980
0019 0	4820	BSC Z SHOULD NOT SKIP	001990
001A 0	1801	SRA 1 0004	002000
0018 0	4820	BSC Z SHOULD NOT SKIP	002010
001C 0	1801	SRA 1 0002	002020
0010 0	4820	BSC Z SHOULD NOT SKIP	002030
0016 0	1801	SRA 1 0001	002040
001F 0	4820	BSC Z SHOULD NOT SKIP	002050
0020 0	3003	WAIT /0003 I EQU. 0021 A EQU. 0001	002060
		* ERROR, RESET THEN SI, SEE EACH INST.	002070
		* DK PRESS START	002080
0021 0	1801	SRA 1 0000	00 <b>2090</b>
0022 0	4820	BSC Z SHOULD SKIP	002100
0023 0	30F3	WAIT -13 **ERR. A SHOULD BE ZERO	002110
0024 0	3003	WAIT /0003 I EQU. 0025 A EQU. 0000	002120
		# ERROR, RESET THEN SI, SEE EACH INST.	002130
		* OK PRESS START	002140
		*DK. SHOWS I CNTR. OK FROM 0000 TO /0025	002150
		* BSC Z SKIPS ONLY WHEN ACC = 0000	002160
		* SRA 1 OK FOR ONE BIT IN ANY POSITION	002170
		*BEGIN TEST OF TRANSFERS OF B-D-A-M	002180
		* AND A-U-A AND A-B	002190
		* THE CONTENTS OF ACC. IS SHOWN AFTER EACH CHANGE	002200
0025 0	C018	LD KFOFO FOFO	002210
0026 0	8000	STO /FFFF	002220
0027 0	C 0 D 7	LD /FFFF	002230
0028 0	0007	510 /0000	002240
0029 0	C0D6	LD /0000	002250
002A 0	1804	SRA 4 OFOF	002260
0028 0	DOD3	STO /FFFF	002280
0020 0	COD2	LD /FFFF	002280
0 0200	0002	0000 015	002300
00SE 0	CODI	LD /0000	002300

ONE-CARD DIAGNOSTIC	PROGRAMS
CARD 03	
	_

002F 0	3003	WAIT	•	1 EQU. 0030		002310
		-			THEN ST AND	002320
		*SEE THAT REG		N FOR EACH INS		002330
		*		AD CARDS GATE .		002340
		•	IB			002350
				-5 6-7 8-9 10-		002360
		* CARD COL		E F G H	J K	002370
		+ IF	DK + PRI	ESS START		002380
		* TEST FOR				002390
0030 C	FOOD	FOR	KF OF O		FFFF	002400
0031 0	DOOD	STO	KFFFF	STORE IT		002410
0032_0	3003	WAIT		I EQU. 0033		002470
0033 0	F008	€0R	KEEFE	CLEAR ACC TO	0000	002430
0034 0	4820	BSC	Z	SHOULD SKIP		002440
0035 0	30F 3	WAIT	-	**FRR. ACC SHO		002450
0036 0	F009	EOR	K0000	ACC SHOULD S	1AY 0000	002460
003/0	4820	BSC	Z	SHOULD SKIP		002470
0038 0	30F3	WAIT	_	≠≠ERR. ACC SHO		002480
0039 0	F004	EOR	KFOFO	ACC SHOULD G		002490
003A 0	FOC4	FOR	/FFFF	ACC SHOULD		002500
	•	*		VEFFE SHOULD		002510
0038 0	3003	WAIT	• • • • •	I EQU. 003C		002520
				IN SI MODE AND	START	002530
003C 0	70F1	MDX	1005E			002540
		*		T ON THIS CARD		002550
				T SHOW ALL BIT		002560
				-D-A-M AND A-U		002570
				THAT BSC Z WO		002580
				A DNE BIT RIGH		002590
				O, EDR, BSC Z,		002600
				TR. STEPS FROM	/0000 TO/003C	002610
003D 0	8000	K8000 DC	/8000			002620
003E 0	FOFO	KFOFO DC	/F0F0			002630
003F 0	FFFF	KFFFF DC	/FFFF			002640
0040 0	0000	K0000 DC	/0000			002650
0041	0000	BSS	/D			002660
004F 0	2000	DC	/2000	HEXIDECIMAL N		002670
004F 0	0040	DC	/0040	HEXIDECIMAL N	UMBER 3	002680
0050	0000	END	0			002690

PART NO. 2191260 PAGE 5

### IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

PART NO. 2191260 PAGE 5A

ONE-CARD DIAGNOSTIC PROGRAMS
CARD 03

CROSS REFERENCE LISTING

SYMBOL	VALUE	REFERENCES
KFFFF	<b>0</b> 03F	0031,0033
KFOFO	003E	0025,0030,0039
K0000	0040	0036
K8000	003D	0000

ME-CAKE	ומנט כ	6405110	PROG	RAPS
CARD	04			

				ABS				002770
			* TES		NG F	FORMAT D	F LD A STO LDX EDR.	002728
			* THE					002729
							E AND NEGATIVE DNES.	002730
						SIVE TES		002740
				H PAS			TAKES ABOUT 4 SECONDS.	002750
							ING BY SINGLE INSTRUCTION.	002760
							NUOUS LOOP.	002770
028C			+ 10 1	ORG	PK		T + PROGRAM LOAD.	002780
0000	٥	C013				/0000 K4000	MAKE LONG FORM INSTRUCTIONS	002790
0001		1804		LD SRA		4	MAKE LONG FORM INSTRUCTIONS	002791
-	0	0012		STO		K0400		002792
0003		F012		EOR		LD		002793
0004		D011		STO		LO		002794
0005		COOF		LD		K0400	A Committee of the Comm	002795
0006	Ô	F012		€OR		EOR		002 <b>796</b> 002 <b>79</b> 7
0007	_	0011		STO		EOR		002798
8000		COOC		ŁD		K0400	•	002799
0009		F011		EDR		STO		002800
000A		0010		STO		STO		002801
000A	Ō	C009		LD		K0400		002802
000C		F011		FDR		A	•	002802
0000		0010		STO		Ā		002804
<b>900E</b>	0	C006		LD		K0400	i	002805
000F		F001	-	EOR		FDX.		002806
0010	0	0000		STO		LDX		002807
0011	00	64000016	LOX	LDX	L	LD	BRANCH TO TEST LONG FORM.	002808
0013	0	30F4		HAIT		-12	**ERR. LDX FAILED	002809
0014	0	4000	K4000	DC		/4000		002810
0015	0	0400	K0400	DC		/0400		002812
0016	00	C4000031	F.D	LD	L	KFOFO	BEGIN LONG FORM TEST	002813
0018	0	1804		SRA		4		002814
		F4000031	EOR	EOR	L	KFOFO		002815
0018	00	D400002F	STO	STO	Ŀ	KFFFF		002816
001D	0	3004		WAIT		/0004	SEE ACC. EQU. FFFF	002840
		94000030	A	A	L	KOCO1		002841
<b>0</b> 02 <b>0</b>	_	<b>00</b> 00		STO		SUMPL	CLEAR SUM PLUS LOCATION	002860
0021	-	DO 0 B		STO		IMMUZ	CLEAR SUM MINUS LOCATION	002870
0022		3004		MAIT		/0004	SEE ACC. EQU. 0000	002880
0023	_	C009	BEGIN			SUMMI	LOAD SUM OF MINUS ONES	002890
0024	_	900A		A		KFFFF	ADD MINUS ONE TO IT	002900
0025	-	D007		STO		SUMMI	STORE SUM OF MINUS ONES	002910
0026		C007		LD		SUMPE.	LOAD SUM OF PLUS ONES	002920
0027		8008		A		KO GO 1	ADD PLUS ONE TO IT	002930
0028		D005		STO		SUMPL	STORE SUM OF PLUS ONES	002940
0029		8003		A		SUMMI	ADD SUMMI TO SUMPL	002950
002A 002B		4820		BSC		Z	SHOULD ALWAYS SKIP	002960
		30F4		WAIT		-12	**ERR. ACC NOT ZERO	002970
002C 002D		70F6 0000	CIAMM	MDX		BEGIN		002980
0020 002E	_	9000	SUMMI			/0000		002990
002F	0	0000	SUMPL			/0000		003000
002F		0000	KFFFF			/0000		003010
0030		F0F0	K0001.			/0001 /F0F0		003020
0032	5	001C	NE OF O	BSS		/1C		003030
0032 004 E	0	2000		DC B22		/1000	MENINECIMAL MUMBER A	003040
004F		0020		DC .		<b>/0</b> 020	HEXIDECIMAL NUMBER O HEXIDECIMAL NUMBER 4	003050
0050	J	0000		END		0	HEALDEGIMAL MUMBER 4	003060
<b>-</b>		3370		-170		Ÿ		003070

ONE-CARD DIAGNOSTIC PROGRAMS

CARD 05

ONE-CARD DIAGNOSTIC PROGRAMS CARD 04

#### CROSS REFERENCE LISTING

FERENCES
DC • 000D
2C
06,0007
18,0024
16,0019
1F,0027
02,0005,0008,000B,000F
00
03,0004,0011
OF,0010
09,000A
21,0023,0025,0029
20,0026,0028

PROG ID 03A5-1 PAGE 6

003100 28A 003110 ORG 02BC * TEST THAT LOCS. GOSO THRU FFF CAN BE ADDRESSED 003120 003130 * PROGRAM SHOULD STOP AT LOC. DEFE WITH 8 300A 003140 * PRESS RESET AND START. PROGRAM THEN SHOULD STOP * AT LOC. 0044 WITH 8 30GA AND ACC. OFAF WHICH 003150 * IS THE NUMBER OF LOCATIONS TESTED. PROGRAM 003160 003170 * CAN BE RE-RUN BY PRESSING START. 003180 PROGRAM REPLACES THIS K1000 MOO1 LD 0000 0 C022 **U03190** SRA 0001 0 1802 003200 STLN EDR 0002 0 FO2F MAKE UP LONG INSTRUCTIONS 003210 STWT STO 0003 0 003220 STLN STQ 0004 0 0020 003230 LD K1000 0005 0 C01D 003240 SRA 0006 0 1902 003250 CHCK EOR 0007 0 F035 003260 CHCK **\$1**0 0008 0 0034 003270 KF000 LD 0009 0 CO1A 003280 SRA 000A 0 1804 003290 STWT+1 EDR 0008 0 F005 003300 STO STWT+1 000C 0 P004 003310 CONT 10 0000 0 0018 003320 MODIFY LOCATION 0000 MOD1 STO 000F 0 D0F1 003330 LD KWAIT 000F 0 C03B PUT WAIT INTO FOFF 003340 STWT STO /00FF 0010 00 040000FF 003350 SUMC 0012 0 CO15 LD 003360 FORM CHECK SUM MDD3 Α MDD3+1 0013 0 8000 003370 SUMC 0014 0 0013 STO 003380 MOD3 LD 0015 0 COFD 003390 KC001 0016 0 800A 003400 STO MOD3 0017 9 DOFB 003410 EOR CDN3 0018 0 F00F 003420 BSC 0019 0 4820 7 003430 MDD3-1 MDX 0014 0 70F7 003440 LO SUMC 001B 0 COOC 003450 SHOULD SKIP BSC Z 4820 001C 0 003460 **ERR. SUM SHOULD BE 0000 TIAN 0010 0 30F5 -11 003470 001E 0 700B MDX RSTR USED TO MAKE CHECK SUM 003480 DC. /OODC 001F 0 00DC USED TO MAKE CHECK SUM 003481 /OODC DC. 0020 0 00DC 003490 /0001 0021 0 0001 K0001 DC 003500 KBGIN DC /5000 0022 0 5000 003510 /1000 K1000 DC 0023 0 1000 003520 /F000 0024 0 F000 KFOCO DC 003530 KBSI BSI 0025 0 40FF 003540 MDX CHECK-MOD1-1 CONI 0026 0 703A 003550 BGIN-MOD3 0027 0 8030 CON3 A X .003560 0028 0 00FC SUMC DC /00FC 003570 SUML DC /2030 0029 0 2030 003580 LOAD ACC. TO 5000 KBGIN RSTR LD 002A 0 COF7 003590 SHIFT TO /0050 SRA 0028 0 1808 003600 RESTORE STLN+1 STO Onzc 0 D005 003610 RESTORE CHCK+1 STO 0020 0 D010 003620 ACC = /0000 SRA 16 002E 0 1810 003630 RESTORE SUMI STO 002F 0 D0F9 PUT BSI-1 INTO CORE 003640 KBSI L'D 0030 0 COF4 003650 /0050 STLN STO 0031 00 04000050 003660 STLN+1 LD 0033 0 COFE 003670 MODIFY STORE ADDRESS K0001 0034 0 80EC 003680 STLN+1 STO 0035.0 DOFC 003690 FΩR STWT+1 0036 0 FODA 003700 SKIP WHEN LOC. OFFE STORED BSC 0037 0 4820 003710 STLN-1 MOX 0038 0 70F7 RUN SERIFS OF BSI-1 STORED 003720 10050 MDX 0039 0 7016 003730 ** ERR. ADDRESS PLUS ONE -11 MAIT 0034 0 30F5 003740 * DOES NOT FOUAL ADRESS OF LOCATION TESTED. 003750 LOAD THE ADDRESS BEING CHCK+1 CHECK LD 0.038 .0 COO2 003760 TESTED AND ADD ONE. 003C 0 80E4

## ONF-CAPD DIAGNOSTIC PROGRAMS CARD 05

0030	00	F4000050	CHCK	FOR	L	/0050	COMPARE WITH CONTENTS.	003770
003F		4820		BSC		Z	SHOULD BE ZERO AND SKIP	003780
0040	0	7 OF 9		MOX		CHECK-1	ERROR, STOP + SING. INST.	003790
0041	0	COET		LD		SUML		003800
0042	0	80DE		A		K0001	FORM SUM OF = LDCS. TESTED	003810
0043	0	DØ 65		STO		SUML		003820
0044	0	COF9		LD		CHCK+1	MODIFY TO TEST NEXT LOC.	003830
0045	0	8008		A		K0001		003840
0046	0	DOF7		STO		CHCK+1	the second secon	003850
0047	0	FOC9		FOR		STWT+1	CHECK IF ALL TESTED	003860
0048	0	4820		BSC		7	SKIP, ALL LOCS. TESTED	003870
0049	0	70°1		MDX		CHCK-2	GO CHECK NEXT LOCATION	003880
004 A	0	CODE		LO		SUML	LOAD SUM OF NUMBER TESTED.	003890
004B	0	3005	KWAIT	WAIT		/0005	ACC. EQU. OFAF IS NUMBER	003900
004C	0	7000		MDX		RSTR	TESTED.	003910
004D	Ó	DBFF		DC		/D8FF	USED TO MAKE CHECK SUM	003920
004E	0	2000		DC		/2000	HEXIDECIMAL NUMBER O	003940
004F	0	0010	BGIN	DC		/0010	HEXIDECIMAL NUMBER 5	003950
0050		9000		FND		. 0		003960

ONE-CARD DIAGNOSTIC PROGRAMS
CARD 05

01MAY66

EC NO. 4154908

DATE

#### CROSS REFERENCE LISTING

SYMBOL	VALUE	REFERENCES
BGIN	004F	0027
CHCK	003D	0007,0008,002D,0038,0044,0046,0049
CHECK	003B	0026,0040
CONI	0026	0000
CON3	0027	0018
KBGIN	0022	0024
KBSI	0025	0030
KF000	0024	0009
CHAIT	0048	000F
K0001	0021	0015,0034,0030,0042,0045
K1000	0023	0000,0005
4001	0000	000F.0026
-		
SUML	0029	002F,0041,0043,004A
CON3 KBGIN KBSI KFOOO KWAIT KOOOI K1000 MODDI MODD3 RSTR STLN STWT	0027 0022 0025 0024 0048 0021 0023 0000 0013 0024 0031 0010	0018 002A 0030 0009 000F 0016,0034,003C,0042,0045 0000,0005 000E,0026 0013,0015,0017,001A,0027 001E,004C 0002,0004,002C,0033,0035,0038 0003,000B,000C,0036,0047

# THE-CAFD DIAGNOSTIC PROGRAMS CARD 06

DATE EC NO.

O1MAY66

					ABS		•	003990
028C					DIRG	0		004000
							1 FUNCTIONS	004010
							FOR DSW + FOR COLUMN DATA	004020
							ICAL TO CARD 1 FROM 10 TO 4C	004030
0000		6034				XIO COMM		004040
0000 0001		0024		START		RDIN+1	SET UP I/O CONT. COMMANDS	004050
0002	0	1304 F024			SRA	4		004060
0002		0021			E OR	RDSW+1		004070
0004		0022			510 510	RDIN+1		004080
	<b>o</b>	0023			LD	RDSW+1 SENSE+1	MAKE UP STORE LONG	004090
0006		1901			SRA	1 3ENSE 4 1	MAKE UP STUKE LUNG	004100
0007		F034			EOR	STORE	•	004110 004120
000R		D933			STO	STORE		004120
0009		C014			LD	CHKSM	MAKE UP ADDR. FOR STO LONG	004140
0004	0	1808			SRA	8	The Grand For Std 2010	004150
0009	0	F031			EDR	STORE+1		004160
0000	0	0600			STO	STORE+1		004170
000D	a	701F			MDX	SRTRD		004180
000F		0000			DC .	0		004190
000F		0000			DC	0		004200
001Q		0000			DC	0		004210
0011		0000			DC	0		004220
0012		0000			DC	0	•	004230
0013		0000			DC	0		004240
0014		0000			DC	0		004250
0015		0000			DC	0		004260
0016 0017		0000 0000			DC	0		004270
7018		0000			DC DC			004280
0019		2000			DC			004290
001A		0000			DC			004300 004310
001B		0000			DC			004320
001C		2020			DC	0		004330
0010		700F		ENDCK		SRTRD		004340
001F	0	0.088		CHKSM		/B800		004350
001F	0	0800		K0800		/0800		004360
0020	n	8003		K8003	DC	/8003		004370
0031		8000		K8000	DC ·	/8000		004380
0022		0001		K0001	DC	/0001		004390
0023		2200			DC	/0000		0044 00
0024		0000		RDIN	DC	/0000	RD SWS. INTO LOCS. O OR 1	004410
0025		4000			DC	/A000	/3A00 SET BY PROGRAM	004420
0026		9200		RDSH	DC	SENSE	RD SWS. INTO LOC. SENSE	004430
0027		3000		CENCE	DC	/3000	/3A00 SET BY PROGRAM	004440
0029		,0004 2808		SENSE	•	/0004	SENSE DSW CONTROL COMMAND	004450
002 A		2000		COUNT	DC.	/2808		004460
002B		F0F3		ERROR		/0000 K0800	RESTORE ACC. TO DSW	004470 004480
002C		30F6		LANGA	MAIT	-10	**ERR. STOP DSW NOT RIGHT	
0020		3006		SRTRD	••••	16	TO LOOP, REPLACE WAIT	004490 004500
302E		03F7		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	XIO	RDSW	READ SWITCHES INTO SENSE	004510
002F	0	COFE			LD	SENSE	LOAD BIT SWS. INTO ACC.	004520
0030		FOFF			FOR	K8003	CHECK BITS 0.14+15 ONLY	004530
0031	0	4920			BSC	2	SKIP IF BITS 0,14+15 ONLY	004540
0032		700F	•		MDX	CONTI	CONTINUE DSW ANALYSIS	004550
0033		98F 0			XIO	RDIN	READ BIT SWITCHES INTO 0.1	004560
0034		COEF			LD	RDIN		004570
0035		FOEC			EOR	K0001	SHITCH READ IN AREA, EVEN	004580
0036		DOED			510	RDIN	TIMES IN O ODD IN 1	004590
0037		4820			BSC	2	SKIP 2 WORDS READ	004600
0038		70F4			MDX	SRTRD		004610
0039		6006			LD	START	GET FIRST WORD	004620
003A (		1808			SRA	8 CTADTAL	SHIFT IT	004630
003B (		F0C5 C004		STORE	EDR :	START+1	EQR WITH SECOND WORD	004640
0030		00F5		31076	DC DC	/C004 /00F5	STORE LONG AT 4D SET UP BY PROG.	004650
3030		30. )			.,.		JET OF UT FRUG.	004660

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# ONE-CARD DIAGNOSTIC PROGRAMS CARD 06

IBM MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

003	SF (	COFE	•	LD	STORE+1		004670
003	SF C	80F3	3	A	K0001+1	DUMMY MODIFY OF STO L	004680
004	0 (	DOF	•	510	STORE+1		004690
004	1 (	70EF	į	MD X	SRTRD		904700
004	2 (	FODE	CONTI	E OR	K8000	CHECK FOR BITS 14+15 ONLY	004710
004	3 9	4820	)	BSC	2	SKIP BUSY AND NOT READY	004720
004	4 (	7001		MDX	CONT 2		004730
004	15 (	70E7	7	MDX	SRTRD		004740
0.04	6 (	COE	CONT 2	LD	SENSE	BIT SWS. LOADED TO ACC.	004750
004	7 (	F007	•	EOR	K0800	CHECK FOR BIT 4 ONLY	004760
004	8 0	4820	)	BSC	2	SKIP END OF CARD	004770
0.04	9 (	70E1		MOX	EPROR		004780
004	A C	CODF		LD	COUNT	COUNT PASSES	004790
004	B (	8006	,	A	K0001		004800
004	C	70E0	)	MDX	SRTRD		004810
004	D C	9000	,	DC	0		004820
004	EC	2000	)	DC	/200 <b>0</b>	HEXIDECIMAL NUMBER O	004830
004	F	0008	}	DC	/0008	HEXIDECIMAL NUMBER 6	004840
005	0 .	0000	1	END	0		004850

# ONE-CARD DIAGNOSTIC PROGRAMS CARD 06

### CROSS REFERENCE LISTING

SYMBOL	VALUE	REFERENCES
CHKSM	001F	0009
CONT1	0042	0032
CONT2	0046	0044
COUNT	002A	0044
ENDCK	001D	
ERROR	0028	0049
K0001	0022	0035,003F,004B
K0800	001F	0028,0047
K8000	0021	0042
K8003	0020	0030
RDIN	0024	0000,0003,0033,0034,0036
RDSW	0026	0002,0004,002E
SENSF	<b>9028</b>	0005,0026,002F,0046
SRTRD	<b>00</b> 20	0000,001D,0038,0041,0045,004C
START	0000	0039,0038
STORE	003C	0007,0008,000B,000C,003E,0040

PROG ID 03A5-1 PAGE 9 ONE-CARD DIAGNESTIC PROGRAMS
CARD 07

ABS
OZBC
ORG

THE MAINTENANCE DIAGNOSTIC PROGRAM FOR THE 1130 SYSTEM

				ABS		<ul> <li>Control of the second of the se</li></ul>	
0280				ORG			004880
					0		004890
			• •	EZI DOORF	E BRECISI	DN LOAD AND ADD AND	004891
			* P	ROGRAM FD	R SCOPF L	DOPS ON READ CARD	004900
			* X	10 FUNCTI	ONS APE I	DENTICAL TO CARDI BUT NO STOP	004910
			* O	N ERROR.			
0000	0	€017		LD	KFOFO	CET UP CONCTANT ASSES	004920
0001		1804				SET UP CONSTANT /OFOF	004921
				SRA	4		004922
0002		DO 1 6		STO	KF0F0+1		004923
0003	0	D016		STO	KF0F0+2	•	
0004	0	C813		F <b>D</b> D	KFOFO	TEST LOAD DOUBLE	004924
0005	0	8914		AD			0 <b>0</b> 4925
0 006	-	3007			KF0F0+2		0 <b>04</b> 926
0000	•	,007		WAIT	/0007	SEE ACC. FFFF Q FFFF IF OK	004927
			*	,		CONT. IF NOT RESET AND SI.	004928
0007		COID	STAF	RT LD	RDIN+1	CORRECT I/O CONT. COMM.	004930
0009	0	1802		SRA	2	SHIFT IT	
0009	0	0018		STD	RDIN+1		004940
000A	0	COLA				STORE IT	004950
0000				r D	K0001+1		004960
		1801		SRA	1	SHIFT IT	004970
0000		0016		STO	K0001+1	STORE IT	004980
<b>0</b> 00D	0	COIB	e de la companya de l	L D	SENSE+1	CORRECT I/O CONT. COMM.	
000E	0	1803		SRA	3	SHIFT IT	004990
000F	0	D019		STO			005 <b>0</b> 00
0010		F016		_	SENSE+1	STORE IT	005010
				FDR	RESET+1		005020
0011		<b>D</b> 015		510	RESET+1		005030
0012	0	700 A	*	MDX	ENDCK		005040
0013	0	9900		CC	0		
0014	0	0000		DC	ŏ		005060
0015		9000					005070
				DC	0		005080
0016		0000		DC	0		005090
0017		0000		DC	0		005100
0018	0	FOFO	KFOF	O DC	/FOFO		
0019	0	OFOF		DC	/OFOF		005110
001A		QFOF				<b></b>	005120
001B				DC	/OFOF	PUT IN BY PROGRAM	005200
		FOFO		Đ <b>C</b>	/F OF 0		005210
001C		9000		DC	0		005215
0010	0	70 <b>0</b> F	ENDC	K MDX	SRTRD		_
001F	0	0800	K080	O DC	/0800		005220
001F	٥	8003		3 DC			005230
0020				_	/8003		005240
		8000	*700	O DC	/8000		005250
0021		0000		DC	0		005260
0022	0	0001	K000	1 DC	/0001	START RD, USED AS CONSTANT	
0023	0	2808		DC	/2808	/1404 SET BY PROG.	005270
0024	0	0000	RDIN			PEAD IN ACCOUNTS	005280
0025		4800	NO IN		/0000	READ IN LOCATIONS O AND 1	005290
				DC	/4800	/1200 SET BY PROG.	005300
0026		0000	RESE	1 DC	0	RESET DSW CONTROL COMMAND	005310
0027	-	0003		DC	/0003	/1703 SET BY PROG.	005320
0028	0	<b>0</b> 004	SENS	E DC	/00f4	SENSE OSW CONTROL COMMAND	
0029	0	8800		DC	/B800	/1700 CET BY DROC	005330
002A	n	0000		DC		/1700 SET BY PROG.	005340
0028			£000		0		005350
	-	FOF 2	EKKU	R FOR	K0800	RESTORE ACC. TO DSW	005360
005C		7000		MDX	*	PUT WAIT HERE FOR ERR. STOP	005370
0020	0	08F4	SRTR	D XIO	K0001	START READ	005380
002F	0	08F7		XIO .	RESET	RESET DSW	
002F	0	08F8		XIO			005390
0030		FOEE			SENSE	SENSE DSW FOR CRP	005400
				EDR	K8003	CHECK BITS 0,14+15 ONLY	005410
0031		4820		BSC	2	SKIP IF BITS 0.14+15 ONLY	005420
0032		7.00F		MDX	CONTI	RD COL.	005430
0033	0	09F0		XIO	RDIN	= ·	
0034		COEF		ĹĎ	RDIN		005440
0.035		FOEC					005450
				EOR	K0001		005460
0036		DOED		STO	RDIN		005470
0037		4820		BSC	Z	SKIP, ODD COL. JUST READ	005480
0038	0	7002		MDX	HOP	Des Cost Cost Read	
0039	0	COCT	•	LD	/0001	LOAD BOD COL WAS SEAS	005490
003A		7006	•			LOAD ODD COL. JUST READ	00 <b>550</b> 0
				MDX	JUMP		005510
003B		COC4	. Н <b>О</b> Р	LD	/0000	LOAD EVEN COL. JUST READ	005520
003C	0	7004		MDX	JUMP		005530

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	6.1	PUNCHED-CARD 8-8 FORMAT
1.	PURPOS	EE
	THE LU	D PROGRAM DECKS PUNCHED IN THE FORMAT SUCH AS THE CPU AND CORE TESTS.  ADER IS CONSTRUCTED TO USE A MINIMAL INSTRUCTION SET, AND PROVIDE  IAGNOSTIC ABILITY.
2.	PREREQ	DUISITES
	2.1	PROGRAM PREREQUISITES
		THE BASIC LOADER WILL ONLY LOAD PROGRAM DECKS WHICH ARE PUNCHED IN THE 8-8 FORMAT DESCRIBED IN SECTION 6.1.
	2.2	EQUIPMENT PREREQUISITES
		A. 1131 CENTRAL PROCESSING UNIT (CPU). B. 2501 CARD READER WITH IPL.

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#### 3. USE PROCEDURE

- 3.1 NORMAL LOADING PROCEDURE
  - A. AT 2501 CARD READER,
    - 1. DEPRESS NPRO PUSHBUTTON TO CLEAR FEED.
    - 2. PLACE BASIC LOADER DECK, FOLLOWED BY MAIN PROGRAM AND TWO BLANK CARDS IN HOPPER.
    - 3. DEPRESS START PUSHBUTTON. READY INDICATOR SHOULD LIGHT.
  - B. AT 1131 CPU,
    - 1. PUSH RESET.
    - 2. PUSH PROGRAM LOAD. MAIN PROGRAM SHOULD LOAD AND BEGIN EXECUTION.
    - 3. IF PROGRAM FAILS TO LOAD OR HALTS AT A WAIT INSTRUCTION BELOW LOCATION 012C, REFER TO SECTION 3.2
- 3.2 DIAGNOSTIC LOADING PROCEDURE
  - 1. SET INTERRUPT DELAY SWITCH (ON CE PANEL) TO ON POSITION.
  - 2. RETRY LOADING PROCEDURE.

IF PROGRAM LOADS, RUN CPU AND INTERRUPT TESTS TO DIAGNOSE NORMAL LOADER FAILURE.

IF PROGRAM DOES NOT LOAD, REFER TO SECTION 3.3

3.3 DIAGNOSTIC GUIDE

NOTE

ALL REGISTER-CONTENT INDICATIONS IN FOLLOWING STEPS ARE EXPRESSED IN HEXADECIMAL NOTATION.

FAILURE DESCRIPTION SUGGESTED ACTION + POSSIBLE CAUSE OF FAILURE

- 1. NO CARD FEEDS POSSIBLE FAILURE OF EITHER PROGRAM-LOAD MODE OR READER.
- 2. FIRST CARD FEEDS BUT IS NOT POSSIBLE FAILURE OF READER. READ CORRECTLY.
- 3. FIRST CARD IS
  READ CORRECTLY
  BUT NOT ABLE TO
  LOAD REMAINDER
  OF LOADER.

  POSSIBLE FAILURE OF CPU INSTRUCTIONS
  USED TO BOOTSTRAP LOADER.
- 4. MAIN PROGRAM
  STARTS EXECUTING
  BEFORE ALL CARDS
  HAVE BEEN LOADED. A READING PROBLEM IS INDICATED.
- 5. ALL CARDS FEED
  BUT MAIN PROGRAM
  DID NOT EXECUTE.

  SEE IF LAST CARD WENT PAST THE READ STATION
  OF THE 1442. IF IT DID, RUN ONE-CARD
  DIAGNOSTIC PROGRAMS. CHECK THAT MAIN PROGRAM
  IS FOLLOWED BY TWO BLANK CARDS.

#### 3.4*** PROGRAM HALTS

.HALT NO. .(B REG).	DESCRIPTION	RESTART ACTION
30F1 30F5 30F7 30F8	CHECK SUM ERROR ON FIRST CARD OF LOADER. EITHER THE CARD READ IN WRONG, OR THE VARIOUS WORDS WHICH ARE STORED BY THE FIRST CARD WERE NOT PROPERLY GENERATED.  READER CHECK WHEN LOADING TEST PROGRAM  CHECK SUM WHEN LOADING PROGRAM. CARD COLUMN 1-7B DID NOT HAVE ZERO CHECK SUM. READER NOT READY BEFORE LOADING WAS COMPLETED.  MOVE ERROR. MOVED DATA DID NOT COMPARE TO INPUT DATA.	RELOAD  NPRO THEN PLACE CARDS RUN OUT IN FRONT OF REMAINING DECK AND PRESS START.  RELOAD OR PRESS START TO RETRY THE SAME CARD.  MAKE READER READY, AND CHECK IF LAST CARD IS PROPER. NPRO THEN PLACE CARDS RUN OUT IN FRONT OF RE- MAINING DECK AND PRESS START.

^{4.} PRINTOUTS (NONE)

OMMENTS

THE 2501 BASIC LOADER IS DESIGNED TO SUCCESSFULLY LOAD THE 8-8 FORMAT TESTS SUCH AS CPU AND CORE TESTS. THE LOADER USES A MINIMUM AMOUNT OF CIRCUITS. IT WILL RUN WITH OR WITHOUT INTERRUPT, USES NO INDEX REGISTERS, AND WILL LOOP ON EASILY SCOPED LOOPS FOR SOME ERRORS. THE CARD IMAGE IS PRESERVED IN CORE UNTIL IT HAS BEEN CHECK SUMMED, AND MOVED TO ITS PROPER LOCATIONS. THE CARD MAY BE DISPLAYED AND COMPARED MANUALLY TO VERIFY PROPER READING. EACH OPERATION, IE. CARD READ, CHECKSUM, MOVE AND CHECK ARE SELF CONTAINED AND DO NOT OVERLAP, ALLOWING A FAILING OPERATION TO BE REPEATED.

- 5.1 BASIC-LOADER FIRST-CARD FUNCTIONS
- 5.1.1 AFTER BEING LOADED IN IPL MODE, THE FIRST-CARD PROGRAM DEVELOPS A CHECKSUM TO DETERMINE IF IT WAS LOADED CORRECTLY. IF THE CHECKSUM IS NOT 0000, THE PROGRAM STOPS AT A WAIT WITH THE DEVELOPED CHECKSUM DISPLAYED BY THE ACCUMULATOR.
- 5.1.2 IF THE CHECKSUM IS CORRECT, THE FIRST-CARD PROGRAM PROCEEDS TO LOAD CARDS TWO THROUGH FIVE. TWO CARD COLUMNS WILL FORM ONE STORAGE WORD BECAUSE THESE CARDS ARE PUNCHED IN 8-8 MODE. THE DSW IS CHECKED, AND IF AN ERROR IS DETECTED, THE PROGRAM WILL STOP AT A WAIT WITH THE ERROR DSW DISPLAYED BY THE ACCUMULATOR. THE CONDITION CAUSING THE DSW ERROR MUST BE CORRECTED BEFORE ATTEMPTING TO RELOAD.

5.1.3	AFTER LOADING CARDS TWO THROUGH FIVE,	THE	PROGRAM	BRANCHES	ΤO
	BEGINNING OF PROGRAM JUST LOADED.				

5.2 FUNCTIONS OF BASIC-LOADER CARDS TWO THROUGH FIVE

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- 5.2.1 CARDS TWO THROUGH FIVE LOAD A MAIN-PROGRAM CARD INTO LOCATIONS 0010 TO 0036. THE DSW IS CHECKED AFTER READING A CARD, AND IF AN ERROR OCCURRED, THE PROGRAM STOPS AT A WAIT WITH THE DSW ERROR DISPLAYED BY THE ACCUMULATOR.
- 5.2.2 CARDS TWO THROUGH FIVE ALSO DEVELOP CHECKSUM OF LOCATIONS 0010 THROUGH 0036. IF CHECKSUM IS OTHER THAN 0000, PROGRAM STOPS AT ERROR WAIT WITH CHECKSUM DISPLAYED BY ACCUMULATOR. A CORRECT CHECKSUM MEANS CARD WAS READ CORRECTLY.
- 5.2.3 THE WORD COUNT, (NUMBER OF WORDS ON THE CARD) IS TAKEN FROM LOCATION 0034. IF IT IS ZERO PROGRAM STOPS AT ERROR-WAIT.
- 5.2.4 THE NUMBER OF WORDS SPECIFIED IN LOCATION 0034 IS RELOCATED, STARTING AT THE ADDRESS THAT WAS SPECIFIED IN CARD COLUMNS 75 AND 76 AND THAT WAS READ INTO LOCATION 0035.
- 5.2.5 THE DATA READ AND THE DATA AT THE TRANSFERED LOCATION ARE COMPARED WORD BY WORD TO VERIFY THAT THE RELOCATION HAS BEEN DONE CORRECTLY.

  AN UNEQUAL COMPARISON RESULTS IN THE PROGRAM STOPPING AT AN ENOV-WAIT INDICATING AN RELOCATION ERROR.
- 5.2.6 THE PROGRAM REPEATS THE STEPS DISCUSSED IN PARAGRAPHS 5.2.1 THROUGH 5.2.5 FOR EACH CARD OF THE MAIN PROGRAM DECK, EXCEPT FOR THE LAST CARD, WHICH MUST HAVE A LOCATION ADDRESS OF 0000. AFTER READING THE CARD AND DEVELOPING THE CHECKSUM, THE PROGRAM BRANCHES TO LOCATION 0010 AND STARTS EXECUTING THE MAIN LINE PROGRAM.

^{5.} COMMENTS

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### 6. APPENDIX

6.1 PUNCHED CARD 8-8 FORMAT

THE ORGANIZATION OF THE PUNCHED CARD 8-8 FORMAT IS AS FOLLOWS.

- A. COLUMNS 1 THROUGH 72 CONTAIN HALF WORDS (8 BITS) PUNCHED INTO ROWS 12 THROUGH 5. WORD-BITS 0 THROUGH 7 ARE PUNCHED INTO EVEN NUMBERED COLUMNS. WORD-BITS 8 THROUGH 15 ARE PUNCHED INTO ODD NUMBERED COLUMNS.
- B. COLUMNS 73 AND 74 CONTAIN A WORD-COUNT OF THE TOTAL NUMBER OF DATA WORDS PUNCHED INTO THE CARD.
- C. COLUMNS 75 AND 76 CONTAIN THE LOCATION, IN CORE WHERE THE DATA ON THE CARD ARE TO BE LOADED.
- D. COLUMNS 77 AND 78 CONTAIN A CHECKSUN (TWO'S COMPLEMENT OF THE SUM OF ALL WORDS IN COLUMNS 1 THROUGH 76).
- E. COLUMNS 79 AND 80 CONTAIN THE CARD'S SEQUENCE NUMBER PUNCHED IN HOLLERITH/HEXADECIMAL FORMAT.

------LAST PAGE -----

DATE 15APR67 15JUN67 EC NO. 419605 420317

PROG ID 03AD-# PAGE 3 BASIC DIAGNOSTIC LOADER - 2501

0000		ABS ORG	0		3AD00020 3AD00030
	*		BOOTSTRAP	CARD #1	3AD00040
	*				3AD00050
	*			IPL. THESE INSTRUCTIONS	3AD00060
	*			G FORM INSTRUCTIONS TO LOAD THE REST OF	3AD00070 3AD00080
	*		THE LOADER		3AD00090
	. *				3AD00100
0000 0 CO37	START		PACK&1	8800	3AD00110
0001 0 1801		SRA	1	4400	3AD00120
0002 0 F034 0003 0 D033		EOR STO	PACK	C400	3AD00130
0004 0 F037		EOR	PACK STO	C400 LD L D400	3AD00140 3AD00150
0005 0 D036		STO	STO	D400 STO L	3AD00150
0006 0 F033		EOR	EOR	F400	3AD00170
0007 0 D032		STO	EOR	F400 EOR L	3AD00180
0008 0 1804 0009 0 F021		SRA	4	0F40	3AD00190
0004 0 F021		EOR STO	K4001 RESET	4F41 RESET IOCC	3AD00200 3AD00210
000B 0 7001		MDX	*&1	4F41	3AD00210
0000 0 0031		DC	INT		3AD00230
000D 0 1808		SRA	8	004F	3AD00240
000E 0 D01B		STO	STRD	004F START DR ADDRS	3AD00250
000F 0 8020 0010 0 D02A		A STO	ONE EOR&1	0050	3AD00260
0011 0 D02B		STO	STO&1	0050 1ST HALF WD ADDRS 0050 1ST STORE ADDRS	3AD00270 3AD00280
0012 0 80 <b>1</b> D		A	ONE	0051	3AD00290
0013 0 D024		STO	PACK&1	0051 2ND HALF WD ADDRS	3AD00300
0014 0 8017		A	LAST	0078	3AD00310
0015 0 D016		STO	LAST	0078 END STORE ADDRS	3AD00320
0016 0 C014 0017 0 1806		LD Sra	K4001 6	4001	3AD00330
0018 0 F014		EOR	RESET	0100 4E01	3AD00340 3AD00350
0019 0 D011		STO	STRD&1	4E01 START RD I/CC	3AD00350
001A 0 1808		SRA	8	004E	3AD00370
001B 0 D033	.4.	STO	MC	004E WORD COUNT	3AD00380
001C 0 C011	* STRT		CHKCM	EDDM CHECK CHM THIS CARD	3AD00390
0010 0 8006	3111	LD A	CHKSM *&6	FORM CHECK SUM, THIS CARD FROM 0024 THRU 004F	3AD00400 3AD00410
001E 0 DOOF		STO	CHKSM	1 Non 3021 11 NO 3011	3AD00410
OOLF O COFD		LD	STRT&1		3AD00430
0020 0 800F		A	ONE	MODIFY ADD INST	3AD00440
0021 0 DOFB 0022 0 FOOC		STO	STRT&1	CHECK THAT LAST LOC CHED	3AD00450
0023 0 4820		EOR BSC	COÑ1 Z	CHECK THAT LAST LOC CHKD SKIP IF FINISHED	3AD00460 3AD00470
0024 0 601C		LDX	STRT	GO GET NEXT WORD	3AD00470
0025 0 C <b>008</b>		LD	CHKSM	GET SUM OF 0024 THRU 004F	3AD00490
0026 0 4820		BSC	Z	SKIP IF CHKSM ZERO	3AD00500
0027 0 30F1 0028 0 6033	ENDCK	WAIT	-15 CD TD D	CHECK SUM ERROR	3AD00510
0028 0 8033	ENDCK *	LUX	SRTRD	START LOADING	3AD00520
	*				3AD00530 3AD00540
0029 0 0800	K0800	DC	/0800		3AD00550
002A 0 0000	STRD	DC	0		3AD00560
002B 0 4001	K4001		/4001		3AD00570
0020 0 0026	LAST	DC	/0026		3AD00580
002D 0 0000 002E 0 001B	RESET		*-* /001B		3AD00590
002F 0 8031	CON1	A X			3AD00600 3AD00610
0030 0 0001	ONE	DC	/0001		3AD00610
	*				3AD00630
					3AD00640
	* *			RUCTIONS LOAD THE REST	3AD00650
	*		OF THE LOA	UER.	3AD00660 3AD00670
	*				3AD00670
0031 0 0000	INT	DC	0		3AD00690

0032 0 6037	LDX	PACK	3AD00700
0022 0 005/	*		3AD00710
0033 0 08F6	SRTRD XIO	STRD	3AD00720
0034 0 08F7	XIO	RESET-1	3AD00730
0035 0 4804	BSC	E	3AD00740
0036 0 6034	LDX	SRTRD&1	3AD00750
	*		3AD00760
0037 0 8000	PACK DC	/8000 LD L RDIN&1	3AD00770
0038 0 8800	DC	/8800	3AD00770
0039 0 1808	SRA	8	
003A 0 2000	EOR DC		3AD00790
003B 0 0000	DC		3AD00800
		0	3AD00810
003C 0 1000	STO DC	/1000 STO L RDIN	3AD00820
003D 0 0000	DC	0	3AD00830
003E 0 C0F9	LD	PACK&1	3AD00840
003F 0 80F0	A	ONE	3AD00850
0040 O DOFA	STO	EOR&1	3AD00860
0041 0 80EE	Α	ONE	3AD00870
0042 0 D0F5	STO	PACK&1 PACK AND	
0043 0 C0F9	LD	STOE1 STORE 8-8	3AD00880
0044 0 80EB			3AD00890
0044 0 80EB	A	ONE LOADER CA	
	STO	STO&1	3AD00910
0046 0 F0E5	EOR	LAST	3AD <b>009</b> 20
0047 0 4820	BSC	Z	3AD00930
0048 0 6037	LDX	PACK	3AD00940
0049 0 7006	END1 MDX	CARD2	3AD00950
004 <b>A</b>	DRG	79	3 <b>AD</b> 00960
004F 0 004E	WC DC	78	3AD00970
	*		3AD00980
•	*		3AD00990
	*	CARD 2 STARTS HERE	
	*	CARD 2 STARTS HERE	3AD01000
	· · · · · · · · · · · · · · · · · · ·		3AD01010
	*		
0050 0000	# DDIN DCC	0	3AD01020
0050 0000	* RDIN BSS	0	3AD01030
0050 O COFE	CARD2 LD	WC	3AD01030 3AD01040
0050 0 COFE 0051 0 D400 00	CARD2 LD STOWC STO	WC L WC&78	3AD01030
0050 0 COFE 0051 0 D400 00 0053 0 COD6	CARD2 LD STOWC STO LD	WC L WC&78 STRD	3AD01030 3AD01040
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA	CARD2 LD STOWC STO LD A	WC L WC&78	3AD01030 3AD01040 3AD01050
0050 0 COFE 0051 0 D400 00 0053 0 C0D6 0054 0 80FA 0055 0 D0D4	CARD2 LD STOWC STO LD	WC L WC&78 STRD	3AD01030 3AD01040 3AD01050 3AD01060
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB	CARD2 LD STOWC STO LD A	WC L WC&78 STRD WC	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080
0050 0 COFE 0051 0 D400 00 0053 0 C0D6 0054 0 80FA 0055 0 D0D4	CARD2 LD STOWC STO LD A STO	WC L WC&78 STRD WC STRD	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB	CARD2 LD STOWC STO LD A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9	CARD2 LD STOWC STO LD A STO LD A STO LD A STO	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5	CARD2 LD STOWC STO LD A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801	CARD2 LD STOWC STO LD A STO LD A STO LD A STO LD A STO LD STO SRA	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01130
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0	CARD2 LD STOWC STO LD A STO LD A STO LD A STO LD STO A STO A STO A STO A	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01110 3AD01120 3AD01130 3AD01140
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF	CARD2 LD STOWC STO LD A STO LD A STO LD A STO LD A STO LD STO LD SRA A STO	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 UC STOWC&1 LAST LAST	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF	CARD2 LD STOWC STO LD A STO LD A STO LD STO LD A STO LD SRA A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 UC STOWC&1 LAST LAST COUNT	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01100 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1	CARD2 LD STOWC STO LD A STO LD A STO LD A STO LD A STO LD SRA A STO LD A	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC LAST LAST COUNT ONE	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD SRA A STO LD A STO SRA A STO STO	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC I LAST LAST COUNT ONE COUNT	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01100 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC LAST LAST COUNT ONE	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01190 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD SRA A STO LD A STO SRA A STO STO	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC I LAST LAST COUNT ONE COUNT	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01120 3AD01130 3AD01150 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01130 3AD01150 3AD01150 3AD01150 3AD01170 3AD01180 3AD01190 3AD01200
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO LD A STO LD A	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01210
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01120 3AD01120 3AD01140 3AD01150 3AD01170 3AD01170 3AD01170 3AD01180 3AD01190 3AD01200 3AD01210
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01180 3AD01200 3AD01200 3AD01220 3AD01230
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01150 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01200 3AD01220 3AD01220 3AD01230
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A ST	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01200 3AD01220 3AD01220 3AD01220 3AD01230
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A LD A STO EOR BSC MDX LDX * * * * *	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01200 3AD01200 3AD01230 3AD01250 3AD01250
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO LD A STO LD A STO EOR BSC MDX LDX * * * * * * * * * * * * * * * * * * *	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01120 3AD01150 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01210 3AD01220 3AD01230 3AD01240 3AD01250 3AD01270
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO LD A STO COR BSC MDX LDX * * * * COUNT DC	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01150 3AD01150 3AD01170 3AD01170 3AD01180 3AD01190 3AD01200
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO LD A STO COUNT CK0004 DC	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01160 3AD01160 3AD01160 3AD01160 3AD01200 3AD01200 3AD01200 3AD01210 3AD01220 3AD01230 3AD01230 3AD01250 3AD01250 3AD01250 3AD01260 3AD01270 3AD01280 3AD01290
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO COUNT CKOOO4 DC *	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01150 3AD01150 3AD01160 3AD01170 3AD01180 3AD01170 3AD01200 3AD01200 3AD01200 3AD01200 3AD01220 3AD01230 3AD01240 3AD01250 3AD01250 3AD01250 3AD01250 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01290 3AD01290
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 B0D1 005E 0 80D1 005F 0 D00CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO EOR BSC MDX LDX * * * COUNT DC K0004 DC * INPUT EQU	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01210 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01280 3AD01290 3AD01290 3AD01290 3AD01290 3AD01290 3AD01300
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO EOR BSC MDX LDX * * * * * * * * * * * * * * * * * * *	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01210 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01280 3AD01290 3AD01290 3AD01290 3AD01290 3AD01290 3AD01300
0050 0 COFE 0051 0 D400 00 0053 0 C0D6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO EOR BSC MDX LDX * * * COUNT DC K0004 DC * INPUT EQU	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01170 3AD011200 3AD01200 3AD01200 3AD01200 3AD01210 3AD01220 3AD01230 3AD01250 3AD01250 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01280 3AD01300 EA CARD 3AD01320
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 CO06 005E 0 80D1 005F 0 D004 0060 0 F004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078	CARD2 LD STOWC STO LD A STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO EOR BSC MDX LDX * * * * * * * * * * * * * * * * * * *	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST LAST COUNT ONE COUNT KO004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS  0 /0004 /0010 CARD INPUT AR INPUT&72 INWC&1	3AD01030 3AD01040 3AD01050 3AD01060 3AD01070 3AD01080 3AD01090 3AD01100 3AD01110 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01200 3AD01200 3AD01200 3AD01200 3AD01200 3AD01200 3AD01200 3AD01200 3AD01200 3AD01230 3AD01230 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01290 3AD01310 CARD 3AD01320 3AD01330
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078  0064 0 0000 0065 0 0004	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO LD A STO LD A STO EOR BSC MDX LDX * * * * * * * * * * * * * * * * * * *	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTRD SRTR2  CONSTANTS AND BUCKETS  0 /0004 /0010 CARD INPUT ARI INPUT&72 WORD COUNT IN INWC&1 INPUT&74 ADDRESS IN CAI	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01120 3AD01130 3AD01140 3AD01150 3AD01160 3AD01170 3AD01180 3AD01190 3AD01210 3AD01220 3AD01220 3AD01220 3AD01220 3AD01220 3AD01220 3AD01220 3AD01230 3AD01240 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01290 3AD01290 3AD01310 CARD 3AD01330 3AD01330 3AD01330
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078  0064 0 0000 0065 0 0004 0010 0058 0059 005A 005B	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS  0 /0004 /0010 CARD INPUT ARI INPUT&72 WORD COUNT IN INWC&1 INPUT&74 ADDRESS IN CAL	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01120 3AD01150 3AD01150 3AD01150 3AD01150 3AD01160 3AD01170 3AD01180 3AD01170 3AD01200 3AD01210 3AD01220 3AD01220 3AD01220 3AD01220 3AD01230 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01290 3AD01230 3AD01330 CARD 3AD01330 RD 3AD01330
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078  0064 0 0000 0065 0 0004	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD A STO EOR BSC MDX LDX *  *  **  COUNT DC K0004 DC *  INPUT EQU INWC EQU INWC EQU INWC EQU INWC EQU INWC EQU INAD EQU INAD EQU INAD EQU INAD EQU STRD2 DC	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS  0 /0004  /0010 CARD INPUT ARI INPUT&72 INWC&1 INPUT&74 ADDRESS IN CAI INAD&1 INPUT-1	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01120 3AD01130 3AD01150 3AD01150 3AD01170 3AD01180 3AD01170 3AD01200 3AD01210 3AD01210 3AD01220 3AD01230 3AD01240 3AD01250 3AD01250 3AD01280 3AD01280 3AD01290 3AD01290 3AD01290 3AD01290 3AD01280 3AD01290 3AD01300 EA 3AD01330 RD 3AD01330 RD 3AD01350 3AD01350 3AD01350
0050 0 COFE 0051 0 D400 00 0053 0 COD6 0054 0 80FA 0055 0 D0D4 0056 0 COFB 0057 0 80F7 0058 0 D0F9 0059 0 COF5 005A 0 1801 005B 0 80D0 005C 0 D0CF 005D 0 C006 005E 0 80D1 005F 0 D004 0060 0 F004 0061 0 4820 0062 0 70D0 0063 0 6078  0064 0 0000 0065 0 0004 0010 0058 0059 005A 005B	CARD2 LD STOWC STO LD A STO LD SRA A STO LD A STO LD SRA A STO LD	WC L WC&78 STRD WC STRD STOWC&1 WC STOWC&1 WC 1 LAST LAST COUNT ONE COUNT K0004 Z SRTRD SRTR2  CONSTANTS AND BUCKETS  0 /0004 /0010 CARD INPUT ARI INPUT&72 WORD COUNT IN INWC&1 INPUT&74 ADDRESS IN CAL	3AD01030 3AD01040 3AD01050 3AD01060 3AD01060 3AD01070 3AD01080 3AD01100 3AD01110 3AD01120 3AD01120 3AD01150 3AD01150 3AD01150 3AD01150 3AD01160 3AD01170 3AD01180 3AD01170 3AD01200 3AD01210 3AD01220 3AD01220 3AD01220 3AD01220 3AD01230 3AD01250 3AD01250 3AD01250 3AD01250 3AD01270 3AD01280 3AD01290 3AD01230 3AD01330 CARD 3AD01330 RD 3AD01330

ASIC DIAGNOSTIC LOADER - 2501

0068	n	0000	CKSUM	חר	0		3AD01380
		4F01					
			REST2		/4F01		3AD01390
		0000	CDCNT		0		3AD01400
006B	0	000F	IPACK	DC	INPUT-1		3AD01410
006C	0	0001	ONE 2	DC	/0001		3AD01420
			*				3 4001430
0060	0	0010	COL1	חר	/0010	INPUT AREA START ADDR OF FIRST HALF WD	3AD01440
					70010	ADDD OF FIRST WALE UP	3AD01440
		0000	INCOL		*-*	ADDK OF FIRST HALF MD	3AU01450
006F	0	0000		DC	*-*	ADDR OF SECOND HALF WD	3AD01460
0070	0	0000	ADDR	DC	<b>*-</b> *	CURRENT CORE ADDR	3AD01470
0071	0	0000	WDCNT	DC	*-*	WORD COUNT	3AD01480
		005F	COL78		INPHT£79	LAST CHECKSUM COL	3AD01490
		FFFF	NONE		-1	NEGATIVE ONE	
						NEGATIVE UNE	3AD01500
		0002	TWO	DC	/0002		3 <b>A</b> D01510
	_	0086	INTE		INT4	INTERRUPT ENTRY	3AD01520 3AD01530 3AD01540
0076	0	004E	WC2	DC	/004E	WORD COUNT	3AD01530
007 <b>7</b>	0	0003	WC2 K0003	DC	/0003		3AD01540
			*				34001550
			*				
			*		T D.C.M. T.M.	THE THETRUSTYONS	3AD01560
					THE REMAIN	ING INSTRUCTIONS LUAD	3AU01570
			*		THE PROGRAI	M DECK.	3 <b>A</b> D01580
			<b>*</b>			ING INSTRUCTIONS LOAD M DECK.	3AD01590
			*				3AD01600
0078	0	COFC		LD	INTE		3AD01610
		D092	JATAZ	CTO	1016	INTERRUPT VECTOR INITIALIZE LOADER RETURN POINT	
				STO	12	INTERRUPT VECTOR	3AD01620
		COE8		LD	COUNT-I	INITIALIZE LUADER	3AD01630 3AD01640
		D <b>0D</b> 4		STO	/0050		3AD01640
007C	0	COF9		LD	WC2		3AD01650
007D	0	D091			INPUT-1	WORD COUNT	3AD01650 3AD01660
			*			WORD COUNT	34001670
			*				3AD01070
						*******	3AD01680
			*		CARD READ		3AD01690
			*		READ PROGRA	AM CARDS INTO /0010 - /005	F 3AD01700
			-4.				
			*				3AD01710
			*				3AD01710
							3AD01720
0075	0	0850	*	~	DECTO 1		3AD01720 3AD01730
		08E9	*	XIO		SENSE DSW	3AD01720 3AD01730 3AD01740
007F	0	4804	*	BSC	E		3AD01720 3AD01730 3AD01740 3AD01750
007F 008 <b>0</b>	0	4804 7001	*			SENSE DSW	3AD01720 3AD01730 3AD01740
007F 008 <b>0</b>	0	4804	*	BSC	E	SENSE DSW	3AD01720 3AD01730 3AD01740 3AD01750
007F 008 <b>0</b> 008 <b>1</b>	0 0 0	4804 7001	*	BSC MDX MDX	E *&1 *&2	SENSE DSW SKIP IF READY	3AD01720 3AD01730 3AD01740 3AD01750 3AD01760 3AD01770
007F 0080 0081 0082	0 0 0	4804 7001 7002 30F8	*	BSC MDX MDX WAIT	E *&1 *&2 -8	SENSE DSW SKIP IF READY	3AD01720 3AD01730 3AD01740 3AD01750 3AD01760 3AD01770 3AD01780
007F 0080 0081 0082	0 0 0	4804 7001 7002	* SRTR3	BSC MDX MDX	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01760 3AD01770 3AD01780 3AD01790
007F 0080 0081 0082 0083	0 0 0 0	4804 7001 7002 30F8 70FA	*	BSC MDX MDX WAIT MDX	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01790 3AD01800
007F 0080 0081 0082 0083	0 0 0 0	4804 7001 7002 30F8 70FA	* SRTR3	BSC MDX MDX WAIT MDX	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01790 3AD01800
007F 0080 0081 0082 0083 0084	0 0 0 0 0	4804 7001 7002 30F8 70FA	* SRTR3	BSC MDX MDX WAIT MDX	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01790 3AD01800
007F 0080 0081 0082 0083 0084	0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878	* SRTR3	BSC MDX MDX WAIT MDX XIO BOSC DC	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01790 3AD01800
007F 0080 0081 0082 0083 0084	0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000	* SRTR3 *	BSC MDX MDX WAIT MDX XIO BOSC DC	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01790 3AD01800
007F 0080 0081 0082 0083 0084 0085 0086 0087	0 0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0	* SRTR3 *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO	E *&1 *&2 -8 *-6	SENSE DSW SKIP IF READY NOT READY LOOP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01790 3AD01800
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088	0 0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE	* SRTR3 *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES	3AD01720 3AD01730 3AD01740 3AD01750 3AD01760 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01850
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089	0 0 0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 &	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088	0 0 0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 &	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01850 3AD01850
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089	0 0 0 0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01870 3AD01880
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089	0 0 0 0 0 0 0 0 0 0	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 &	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01850 3AD01850
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01870 3AD01880 3AD01880 3AD01880
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4 REST2-1	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01880 3AD01880 3AD01880 3AD01880 3AD01890
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A	000000000000000000000000000000000000000	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4 REST2-1	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR	3AD01720 3AD01740 3AD01750 3AD01760 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01850 3AD01860 3AD01870 3AD01870 3AD01870 3AD01870 3AD01870 3AD01870
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A	000000000000000000000000000000000000000	4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01890 3AD01810 3AD01820 3AD01840 3AD01850 3AD01860 3AD01870 3AD01880 3AD01880 3AD01880 3AD01890 3AD01920
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4 REST2-1 2 - CDOK -11	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01790 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01860 3AD01870 3AD01880 3AD01880 3AD01890 3AD01900 3AD01900 3AD01930
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01890 3AD01810 3AD01820 3AD01840 3AD01850 3AD01860 3AD01870 3AD01880 3AD01880 3AD01880 3AD01890 3AD01920
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4 REST2-1 2 - CDOK -11	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01790 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01860 3AD01870 3AD01880 3AD01880 3AD01890 3AD01900 3AD01900 3AD01930
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4  *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT	E *&1 *&2 -8 *-6 STRD2 &-Z *-* REST2-1 K0003 & *-4 REST2-1 2 - CDOK -11	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01780 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01870 3AD01880 3AD01890 3AD01900 3AD01900 3AD01930 3AD01940
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4  *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E *&1 *&2 -8 *-6  STRD2 &-Z *-* REST2-1 K0003 & *-4  REST2-1 2 - CDOK -11 SRTR3	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY	3AD01720 3AD01740 3AD01750 3AD01770 3AD01770 3AD01770 3AD01780 3AD01810 3AD01820 3AD01820 3AD01840 3AD01850 3AD01850 3AD01860 3AD01870 3AD01880 3AD01890 3AD01900 3AD01910 3AD01920 3AD01930 3AD01940 3AD01950 3AD01950 3AD01960
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4  *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY	3AD01720 3AD01740 3AD01750 3AD01760 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01860 3AD01870 3AD01880 3AD01890 3AD01910 3AD01920 3AD01930 3AD01940 3AD01950 3AD01950 3AD01970
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4  *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  ECTION S 1-78 AND CHECK FOR ZERO	3AD01720 3AD01740 3AD01750 3AD01770 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01880 3AD01880 3AD01890 3AD01900 3AD01910 3AD01920 3AD01930 3AD01950 3AD01950 3AD01950 3AD01950 3AD01970 3AD01970 3AD01980
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5	* SRTR3  * INT4  * * * * * * * * * *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY	3AD01720 3AD01740 3AD01750 3AD01770 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01870 3AD01970 3AD01910 3AD01920 3AD01930 3AD01950 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01990
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * ** ** ** ** ** ** ** ** ** ** **	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  ECTION S 1-78 AND CHECK FOR ZERO	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01790 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01870 3AD01880 3AD01870 3AD01890 3AD01900 3AD01910 3AD01900 3AD01900 3AD01900 3AD01940 3AD01950 3AD01950 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01980 3AD01990 3AD01990 3AD01990 3AD01990
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A 008B 008E 008F 0090		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * * * * * * * * *	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  ECTION S 1-78 AND CHECK FOR ZERO	3AD01720 3AD01740 3AD01750 3AD01770 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01870 3AD01970 3AD01910 3AD01920 3AD01930 3AD01950 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01990
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * ** ** ** ** ** ** ** ** ** ** **	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  ECTION S 1-78 AND CHECK FOR ZERO	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01780 3AD01780 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01860 3AD01870 3AD01870 3AD01880 3AD01890 3AD01900 3AD01910 3AD01900 3AD01900 3AD01900 3AD01940 3AD01950 3AD01960 3AD01970 3AD01980 3AD01990 3AD01990 3AD01990 3AD01990
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0089 008A 008B 008E 008F 0090		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * ** ** ** ** ** ** ** ** ** ** **	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  ECTION S 1-78 AND CHECK FOR ZERO  CLEAR CHECKSUM	3AD01720 3AD01730 3AD01740 3AD01750 3AD01770 3AD01770 3AD01780 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01860 3AD01880 3AD01880 3AD01880 3AD01880 3AD01890 3AD01910 3AD01920 3AD01930 3AD01940 3AD01950 3AD01970 3AD01980 3AD01990 3AD01990 3AD01990 3AD01990 3AD01990 3AD01900 3AD01900 3AD01900 3AD01900 3AD01900 3AD01900
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 008C 008D 008E 008F 0090		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * ** ** ** ** ** ** ** ** ** ** **	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  CCTION S 1-78 AND CHECK FOR ZERO  CLEAR CHECKSUM SET UP	3AD01720 3AD01740 3AD01750 3AD01770 3AD01770 3AD01770 3AD01770 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01850 3AD01860 3AD01870 3AD01880 3AD01890 3AD01910 3AD01920 3AD01930 3AD01940 3AD01950 3AD01970 3AD01980 3AD02000 3AD02000
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 0080 008B 008C 008B 008F 0090		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * ** ** ** ** ** ** ** ** ** ** **	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  CLEAR CHECKSUM SET UP INPUT AREA	3AD01720 3AD01740 3AD01750 3AD01760 3AD01770 3AD01770 3AD01770 3AD01800 3AD01810 3AD01820 3AD01830 3AD01850 3AD01850 3AD01850 3AD01850 3AD01870 3AD01890 3AD01910 3AD01910 3AD01920 3AD01930 3AD01940 3AD01950 3AD01970 3AD01970 3AD01970 3AD01980 3AD01990 3AD01970 3AD01970 3AD01970 3AD01970 3AD01980 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD01970 3AD02000 3AD02000 3AD02000 3AD02000
007F 0080 0081 0082 0083 0084 0085 0086 0087 0088 008C 008D 008E 008F 0090		4804 7001 7002 30F8 70FA 08E1 4878 0000 08E0 F0EE 4848 70FC 08DC 1002 4810 7002 30F5 607E	* SRTR3  * INT4  * * ** ** ** ** ** ** ** ** ** ** **	BSC MDX MDX WAIT MDX XIO BOSC DC XIO EOR BOSC MDX XIO SLA BSC MDX WAIT LDX	E	SENSE DSW SKIP IF READY  NOT READY LOOP  INITIATE READ UNCOND LEAVE INTERRUPT INTERRUPT ENTRY SENSE RESET CHECK FOR CHANGES SKIP IF ANY CHANGE LOOP TIL OP COMP  SENSE DSW  SKIP IF ERROR BR ON NO ERROR 2501 READ ERROR RETRY  CCTION S 1-78 AND CHECK FOR ZERO  CLEAR CHECKSUM SET UP	3AD01720 3AD01740 3AD01750 3AD01770 3AD01770 3AD01770 3AD01770 3AD01800 3AD01810 3AD01820 3AD01830 3AD01840 3AD01850 3AD01880 3AD01880 3AD01880 3AD01870 3AD01980 3AD01990 3AD01910 3AD01920 3AD01930 3AD01940 3AD01950 3AD01970 3AD01970 3AD01980 3AD01970 3AD01990 3AD01990 3AD01990 3AD01990 3AD01990 3AD02000 3AD02020 3AD02030

0096 0 DOD8	*	STO		INCOL&1		3AD020
0097 0 C480 006E	CSLD	LD	I	INCOL	LOAD FIRST HALF WD	3AD020
	CSLD		1			3AD020
0099 0 1808		SRA	_	8	SHIFT	3AD02
009A 0 F480 006F		EOR	I		COMBINE SECONE HALF	3AD02
009C 0 80CB		Α		CKSUM	ADD TO CHECKSUM	3AD02
009D O DOCA		STO		CKSUM	STORE RESULT	3AD02
	*					3 <b>A</b> D02
009E 0 COCF		LD		INCOL	*	3AD02
009F 0 80D4		A		TWO	INCREMENT	3AD02
OOAO O DOCD		STO		INCOL	INPUT AREA	3AD02
00A1 0 80CA		A		ONE 2	ADDRESSES	3AD02 3AD02 3AD02
OOA2 O DOCC		STO		INCOL&1	*	3AD02
OOA3 O FOCE		EOR			CHECK FOR LAST COL	3AD02
00A4 0 4820		BSC		Z	SKIP IF LAST COL	3AD02
00A5 0 70F1		MDX		CSLD	CONTINUE	3AD02
0045 0 7071	*	HUX		CSED	CONTINOL	3AD02
00A6 0 COC1	•	LD		CKCHM	CHECK FOR VALID CHECKSUM	
00A7 0 4820		BSC		Z	SHIP IF OK	3AD02
00A8 0 7001		MDX		*&1	DO TO MOVE BOUTTIES	3AD02
00A9 0 7002		MDX		CSOK	BR TO MOVE ROUTINE CHECKSUM ERROR	3AD02 3AD02
00AA 0 30F7		MDX WAIT MDX		-9	CHECKSUM ERROR	
00AB 0 70E5		MDX		CDOK	RETRY CHECKSUM	3AD02
	*					3AD02
	*				CHECK SECTION	3AD02
	*			MOVE AND	CHECK SECTION	3AD02
	*				TWO COLUMNS INTO ONE WORD	
	*			AND MOVE	TO THE PROPER LOCATION.	3AD02
	*			COMPARE W	HAT WAS MOVED TO PACKED	3AD02
	*			WORD.		3AD02
	*					3AD02
	*					3AD02
OOAC O COCO	CSOK	l D		COL1	SET	3AD02
OOAD O DOCO	000	STO		INCOL	INPUT AREA	3AD02
00AE 0 80BD		A		ONE2	ADDRESSES	3AD02
OOAF O DOBF		ŝto		INCOLEI	ADDRESSES	3AD02
00A. 0 500.	*	3.0		INCOLUI		3AD02
0080 0 COA9	·	LD		INAD	SET	3AD02
00B1 0 1808		SRA		8		3AD02
00B2 0 F0A8		EOR		INAD1		3AD02
00B3 0 DOBC		STO		ADDR	FROM CARD	3AD02
CODS O DOBC	*	310		ADDK	FRUM CARD	3AD02
0084 0 COA3	•			INWC	SET NUMBER	
		LD				3AD02
0085 0 1808		SRA		8	OF WORDS	3AD02
00B6 0 F0A2		EOR		INWC1	TO BE MOVED	3AD02
00B7 0 D0B9	*****	STO	_	WDCNT		3AD02
00B8 0 C480 006E	MVLD		i	INCOL	LOAD AND	3AD02
00BA 0 1808		SRA		8	PACK	3AD02
00BB 0 F480 006F		EOR	I	INCOLEI	THE WORD	3AD02
00BD 0 D480 0070		STO	I	ADDR	STO AT CURRENT ADDRESS	3AD02
00BF 0 F480 0070		EOR	I	ADDR	COMPARE TO ACC	3AD02
00C1 0 4820		BSC		Z	SKIP IF MOVE OK	3AD02
0002 0 7001		MDX		<b>*&amp;1</b>	ERROR	3AD02
00C3 0 7002		MDX		MVOK		3AD02
00C4 0 30FC		WAIT		-4	MOVE ERROR	3AD02
00C5 0 70F2		MDX		MVLD	RETRY MOVE	3AD02
	*					3AD02
00C6 0 COAA	MVDK	LD		WDCNT	CHECK IF ALL WORDS	3AD02
	HVUK					
00C7 0 80AB		A		NONE	MOVED	3AD02
00C8 0 DOA8		STO		WDCNT	DECREMENTED WORD COUNT	3AD02
00C9 0 4820		BSC		Z	SKIP IF LAST WORD	3AD02
00CA 0 7008		MDX		MVIN	BR TO INCR ADDR AND CONT	3AD02
	*					3AD02
	*					3AD02
	*			END OF MC		3AD02
	*			CHECK FOR	END CARD AND REINITIALIZE	3AD02
				CHECK FOR ADDR.	END CARD AND REINITIALIZE	3AD02 3AD02

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3AD02740 OOCB O COA4 LD ADDR CHECK FOR LAST CARD 3AD02750 00CC 0 1806 ADDR LESS THAN 40 SRA 6 3AD02760 00CD 0 4820 BSC SKIP IF LAST CARD 3AD02770 00CE 0 70AF MDX SRTR3 BR TO READ NEXT CARD 3AD02780 00CF 0 C093 LD COUNT-1 INITIALIZE LOADER 3AD02790 00D0 0 D400 0050 STO /0050 RETURN POINT 3AD02800 0002 0 6004 LDX BR TO BEGIN PROGRAM /0004 3AD02810 3AD02820 00D3 0 C09A MVIN LD INCOL INCREMENT 3AD02830 00D4 0 809F INPUT AREA TWO 3AD02840 00D5 0 D098 STO INCOL **ADDRESSES** 3AD02850 00D6 0 8095 ONE2 3AD02860 00D7 0 D097 STO INCOL&1 3AD02870 3AD02880 00D8 0 C097 LD **ADDR** INCREMENT 3AD02890 00D9 0 8092 ONE2 CURRENT 3AD02900 00DA 0 D095 STO ADDR STORE ADDRESS 3AD02910 00DB 0 70DC MDX MVLD BR TO MOVE NEXT WORD 3AD02920 0000 0000 END 3AD02930 NO STATEMENTS FLAGGED IN THE ABOVE ASSEMBLY

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CROSS REFERENCE
NAME VALUE REFERENCES
      0070 00B3,00BD,00BF,00CB,00D8,00DA
ADDR
CARD2 0050 0049
CDCNT 006A
CDOK
       0091
            008E,00AB
CHKSM
      002E 001C,001E,0025
CKSUM 0068
            0092,009C,009D,00A6
COL1
       006D 0093,00AC
COL78
      0072
            00A3
CON1
       002F
            0022
      0064 005D,005F,007A,00CF
COUNT
CSLD
       0097
            00A5
CSOK
       OOAC
            00A9
ENDCK 0028
END1
       0049
EOR
       003A
            0006,0007,0010,0040
INAD
       005A 00B0
INADI
       005B 00B2
           0094,0096,0097,009A,009E,00A0,00A2,00AD,00AF,00B8,00BB,00D3,00D5
INCOL
      006E
            0007
INPUT 0010 0066,006B,0072,007D
INT
      0031 000C
INTE
      0075
            0078
INT4
      0086 0075
INWC
      0058
            00B4
INWC1
      0059
            0086
IPACK 006B
K0003 0077 0088
K0004 0065
            0060
K0800 0029
K4001 002B
            0009,0016
      002C 0014,0015,0046,005B,005C
LAST
MVIN
      0003
           OOCA
MVLD
      00B8
            00C5,00DB
MVOK
      00C6 00C3
NONE
      0073
            00C7
           000F,0012,0020,003F,0041,0044,005E
ONE
      0030
ONE 2
      006C
            0095,00A1,00AE,00D6,00D9
PACK
           0000,0002,0003,0013,0032,003E,0042,0048
      0037
RDIN
      0050
RESET
      002D 000A,0018,0034
REST2
      0069
            007E,0087,008B
SRTRD 0033
           0028,0036,0062
SRTR2 0078
           0063
SRTR3
      007E 0090,00CE
START 0000
STO
      003C 0004,0005,0011,0043,0045
STOWC 0051 0056,0058
STRD
           000E,0019,0033,0053,0055
      002A
STRD2 0066 0084
STRT
      001C 001F,0021,0024,002F
TWO
      0074
           009F,00D4
      004F 001B,0050,0051,0054,0057,0059
WC
WC2
      0076 007C
WDCNT 0071 00B7,00C6,00C8
END OF ASSEMBLY
```

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3**A**